FACULTY DEVELOPMENT SERIES

ACTIVITY BASED LEARNING METHOD

MULTI-MODAL DESIGN AND DELIVERY FOR GROUP LEARNING

Sanjay Doctor

FACULTY DEVELOPMENT SERIES

ACTIVITY BASED LEARNING METHOD

MULTI MODAL DESIGN AND DELIVERY FOR GROUP LEARNING

Sanjay Doctor

2022

nayee taaleem

नयी तालीम

SERIES: FACULTY DEVELOPMENT SERIES

JANUARY 2022.

First Edition.

ACTIVITY BASED LEARNING METHOD:
MULTI MODAL DESIGN AND DELIVERY FOR GROUP LEARNING

AUTHOR: SANJAY DOCTOR

Published and Printed by:
Sanjay Doctor,
131, Silver Beach Apts.,
Suryavanshi Hall, Veer Savarkar Marg.
Dadar West, MUMBAI 400028.
Email: sanjay_doctor@hotmail.com

ISBN No. 978-93-5593-471-0

Typeset in IBM Plex Mono.

© 2022 Sanjay Doctor

Copyright Information

Released under the
The Creative Commons Public Domain Dedication.
CC0. Ver 1.

© 2022. This work is licensed under CC-0 license.

The Authors has dedicated the work to the public domain by waiving all of his rights to the work worldwide under copyright law, including all related and neighbouring rights, to the extent allowed by law.
You can copy, modify, distribute and perform the work, even for commercial purposes, all without asking permission.

loka sangha shālā krishi

a peoples' community college for skill training

inclusive and equity
Women | Youth

as India morphs to a digital economy, farm communities are still analogue.

fundamental human rights
article 21 | **right to life**
article 21A | **right to education**

Community-led education stands for the principles of independence, freedom, personal choice and to lead a life with dignity.

a community college provides vocational skills training for people to play a productive role at the workplace supported by the local industry.

- **work focus curriculum**
- **technology focus**
- **community asset**
- **modular, credit based**
- **learn as you earn**
- **the vernacular frame**
- **low barrier entry**

a change agent for the community

Jai Kisān Jai Vigyān.
Sarvodaya | Antodaya

P U B L I S H E R S N O T E

This work will serve as a reference document for the Activity Based Learning Method (ABL) as adapted and designed for adult skill training.

It is proposed that the Activity Based Learning is best suited for youth and adult students who must pass through an outcome-based education (OBE) certification and get skilled, re-skilled or up-skilled to join the workforce.

The ABL Method is a pedagogy template and must be adapted to the user needs.

We are far from the establishment of the Community College - a brick and mortar front supported by a digital delivery and assessment platform. However, the Project Management Office (PMO, established in 2017, has developed and germinated the idea of a community college for several years now and the work continues at a pace commensurate with the variable resources available along the journey.

The goal to create a skill training community college is, both a product and a process. This document contributes to the process design.

December, 2021 Publisher
MUMBAI

ACTIVITY BASED LEARNING METHOD:

MULTI MODAL DESIGN AND DELIVERY FOR GROUP LEARNING

TABLE OF CONTENTS

I	**Introduction**			
	The Shift from Knowledge Building to Skill Training			1
II	**The Emergent Pedagogy as a Response to the Changing Classroom**			
100	PROBLEM	CHALLENGES OF THE NON-FORMAL		3
	101	The Crowd	*3*	
	102	The Traditional and Folk	*3*	
	103	Non-Formal Education	*3*	
200	FRAMEWORKS	LEARNING IN THE DIGITAL AGE		5
	201	Blooms Taxonomy (rev. 2001)	*5*	
	202	The 3 Axis Model of University of Rhode Island (URI)	*6*	
	203	Personal Digital Inquiry	*7*	
	204	Project Based Inquiry	*9*	
	205	Digital and Media Literacies	*10*	
	206	Connections Between the Frameworks	*10*	
	207	Education Pedagogy and Psychology	*11*	
	208	Outcome Based Education (OBE)	*12*	
300	APPROACH	THE EMERGENT ACTIVITY BASED LEARNING		14
	301	Development of Activity Based Learning Method (ABL)	*14*	
	302	The Dynamics of a Teacher-led Classroom	*14*	
	303	A Multi Modal Activity Based Learning Solution	*15*	
III	**The Activity Learning Pedagogy, Method and Tools**			
400	SCHEMA	THE CARD AND DECK		17
	401	The Metaphor of Cards and Deck for the ABL Method	*17*	
	402	Library Classification and Schema	*17*	
	403	Classification of Activity Types	*18*	
	404	Activity Colour Codes and Icons	*18*	
	405	The ABL Card Template	*19*	
500	METHOD	BUILDING BLOCKS FOR ACTIVITY BASED LEARNING		20
	501	Group A: DIVIDER Card	*20*	
	502	Group A: SYLLABUS Card	*21*	
	503	Group B: LEARN Card	*22*	
	504	Group B - SCREEN Card	*23*	
	505	Group B - GLOSSARY Card	*24*	
	506	Group C - DISCOVER Card	*25*	
	507	Group C - WEB / SEARCH Card	*26*	
	508	Group C - SURVEY Card	*27*	
	509	Group D - ACTIVITY Card	*28*	
	510	Group D - GROUP WORK Card	*29*	
	511	Group D - CASE STUDY Card	*30*	
	512	Group E - PROJECT WORK Card	*31*	
	513	Group E- TOWNSQUARE Card	*32*	
	514	Group E - QUIZ	*33*	

ACTIVITY BASED LEARNING METHOD:

MULTI MODAL DESIGN AND DELIVERY FOR GROUP LEARNING

TABLE OF CONTENTS

600	TOOLS	TOOLS FOR ACTIVITY BASED LEARNING		34
	601	The 3-Axis ABL Method	*34*	
	602	The Active Classroom	*34*	
	603	The Learning Wall	*34*	
	604	Student Personal Learning Notebook	*35*	
IV	**Growth and Development of the Activity Learning Method**			
700	SERVICE	EDUCATION AS A SERVICE		40
	701	Services	*40*	
	702	Service Logic for Education	*41*	
	703	The Student Learning Journey	*42*	
800	ASSESSMENT	THE LIFE LONG LEARNER		43
	801	Assessment of the Learner	*43*	
	802	Graduate Attributes	*45*	
	803	Integral View of the Learner	*45*	
	804	Enrichment of Learning Processes by Yoga Darśana	*48*	
	805	Evaluation by the Student	*49*	
V	**Appendix**			
	A.	Short Term Course - Planting Calendar	*50*	
	B.	Very Short Course: Cow Pat Pit (Theory and Practicals)	*64*	

outcome based education

The basic principles of OBE are shifting the focus of educational activity from teaching to learning; skills to thinking; content to process; and teacher instruction to student demonstration.

clarity transparency equitable participatory motivational

activity based learning

is a method of instruction that makes learning **a joyful experience** for the **adult learner**;

by the **modularisation** of the course into learning packets as **decks** of diverse **activity cards**;

supported by classroom tools of **student learning notebooks** and a **community learning wall**;

envisioning the learning experience as a **service journey** map;

so that the adult learner can be evaluated by a **lifelong learning rubric**;

compatible with an outcome based learning **certification**.

I. INTRODUCTION

1. THE SHIFT FROM KNOWLEDGE BUILDING TO SKILL TRAINING

1.1. Over a span of 20+ years, the Government of India shifted the purpose of its education and development policy, from knowledge building and human development, to skill building.

NATIONAL POLICY ON SKILL DEVELOPMENT AND ENTREPRENEURSHIP 2015

62% of India's population is in the working age group (15-59 years), and more than 54% of the total population is below 25 years of age. Our country presently faces a dual challenge of paucity of highly trained workforce, as well as non-employability of large sections of the conventionally educated youth, who possess little or no job skills.

Ministry for Skill Development and Entrepreneurship has been set up in November 2014, to give fresh impetus to the Skill India agenda and help create an appropriate ecosystem that facilitates imparting employable skills to its growing workforce over the next few decade. The primary objective of this policy is to meet the challenge of skilling at a required scale with speed, standard (quality) and sustainability.

Skills development is the shared responsibility of the key stakeholders viz. Government, the entire spectrum of corporate sector, community based organisations, those outstanding, highly qualified and dedicated individuals who have been working in the skilling and entrepreneurship space for many years, industry and trade organisations and other stakeholders.

1.2. For a country of about 1.4 billion, the need for livelihoods and global competitiveness is a planning imperative. Moving along the progression from post-colonial development to the industrial age and now to the global context, India has grown out of its 'developing economy' status to that of a global tiger. Policy makers must transit its young workforce from the farm and artisan sector to global manufacturing hubs.

INDIA SKILL REPORT 2019: MANPOWER FORECAST

Year	2019		2022	
SECTOR	%	mill.	%	mill.
Unorganised	92	435	90	540
Organised	8	38	10	60
Workforce	100	**473**	100	**600**

The Indian workforce is estimated to increase to approximately 600 million by year 2022 from the current 473 million.
(+123 million)

1.3. In the fast-paced world, the time axis has become condensed. Results are required faster than ever before. Skilled workforce is in short supply in a developing market economy with global aspirations, so new inductees must, in the shortest possible time, be ramped up to a competency level that fits the industry job function. Error rates must match Six Sigma quality (99.99%) standards and even beyond. Therefore, Outcome Based Education (OBE) demands testing and certification to ensure that the graduate will perform within the error rate.

1.4. Given this narrative for the historical development of a skill building policy for nation building, the shifts seen are:

- From knowledge building to skill training;
- Leveraging skilled youth workforce as potential post-industrial workers and entrepreneurs to drive national fiscal growth;
- Moving away from the rural - urban bipolar planning model to that of a supply based model driven by demographics and inclusiveness;
- Positing India as a Global Hub for manufacturing - 'Make in India' (launched 2014) and as networked workers for global markets.

INDIA SMARTPHONE EXPORTS ESTIMATED TO CROSS RECORD $1.5 BILLION IN 2020.

'MAKE IN INDIA' INITIATIVE BEARING FRUITS AS PEOPLE ACROSS 24 COUNTRIES USE MOBILE PHONES MADE IN INDIA.

23.11.2020: techARC in its India Mobile Phone Exports Market Scan Report announced today, pegged the total exports of smartphones to cross $1.5 billion by value. This would be over 98% of the total mobile phones exported out of India. Today, India is exporting to 24 countries, some of which are further re-exporting, like UAE, to other markets making Indian made phones available to millions of users.

1.5. This shift to skill training has changed the idea of the classroom, the faculty, student profile, the study program and its evaluation. This paradigm pulls the focus to the non-formal education / training sector due to the sheer scale of such an implementation which must be inclusive and also accommodate the diversity of student needs.

II. THE EMERGENT PEDAGOGY AS A RESPONSE TO T HE CHANGING CLASSROOM

100 | PROBLEM
CHALLENGES IN THE NON-FORMAL

101. THE CROWD

101.1. In these modern times, the adult training classroom resembles a town-square rather than a small learning group. Class strengths have reached the size of a crowd. The very large group, the crowd, is a loosely held agglomerate of individuals.Various sub-groups exist in all possible geometric configurations from large sub-groups to individuals. Even more so in these COVID-19 times, where online classrooms serve remote students who are just a 'digital feed' with a teacher functioning in auto mode serving hundreds with negligent feedback channels.

101.2. The psychology of crowds was first studied in the classical study by Gustave Le Bon in 'Crowds: Study of the Popular Mind' (1895). He proposed that the conscious personality of the individual in a crowd is submerged and that the collective crowd mind dominates; crowd behaviour is united, emotional, and intellectually weak. *There is a madness in the crowd*. Wilfried Bion (1961), a pioneer of Group Relations theory, found that in large groups, the standards of social intercourse lacks intellectual content and critical judgement.

102. THE TRADITIONAL AND THE FOLK

102.1. Society manages a negotiated balance between classical (traditional) and folk (popular) cultures. The traditionalists insist on a strong sense of boundary and maintain purity of their order through an emphasis on inter-generational legacy (*śastra*). In the folk, there is an acceptance of newer ideas, less rules and greater personal freedom and continuity of tradition (*parampārā*).

102.2. Formal education, from its classical lineage, maintains a formal structure across primary schooling to higher education, with dovetailed process-flows between stages. There are distinct formal roles for the teacher, students and the host institute (school/college/university). With the phasing out of publicly funded education, cost of formal higher education is affordable only for those who are credit worthy for student loans or those with family support. And now with jobs linked to certification, there is a need for an alternative path for those excluded from their right to education.

103. NON FORMAL EDUCATION

103.1. Non-formal education is a term in use by development agencies to describe the popular method of education embedded in the folk practice. Key values are equity, inclusion, life-long learning, short duration and student focussed. It is used to deliver programmes for life-skills work skills and social or cultural development.

NON FORMAL EDUCATION - UNESCO

Education that is institutionalised, intentional and planned by an education provider. The defining characteristic of non-formal education is:

- An addition, alternative and/or a complement to formal education within the process of the lifelong learning of individuals.
- Often provided to guarantee the right of access to education for all.
- Caters for people of all ages, but does not necessarily apply a continuous pathway-structure; it may be short in duration and/or low intensity, and it is typically provided in the form of short courses, workshops or seminars.
- Leads to qualifications that are not recognised as formal qualifications by the relevant national educational authorities or to no qualifications at all.
- Cover programmes contributing to adult and youth literacy and education for out-of-school children, as well as programmes on life skills, work skills, and social or cultural development.

103.2. Inclusion is a key feature of non-formal education. For those who could not receive formal education, being selected for participation in a training course is an achievement in itself. So rather than outcomes, traditionally these courses required in-personal contact and a passage through the program with varying participation. By tradition, international donor agencies set performance metrics for delivery and social impact in developing countries. Without any testing and evaluation, the data on student competency and outcomes is never collated. Subjective reports and pictorial photo albums are proof of a course delivered and a target met.

103.3. The need for a non-formal education is now more than ever before because it drives social reformation in a growing elitist social order. For those with no history of access to classical traditions, and who cannot meet the entry barriers of either scholastic, financial or life-stage assessments, the non-formal mode is a way to lessen this divide.

103.4. This requires non-formal to adopt the best practices from the classical formal education institutions and transform them into a new model. This transformation is being driven by the outcome-based education framework that goes beyond the classical and folk. The graduate must demonstrate competence; the path chosen does not matter.

103.5. Rising to this challenge, the idea of the community college is a response to creating a folk educational institution that adopts the robustness and formalness of classical education. The structure of a central brick and mortar core with federated local campuses hosted by public and private institutions is able to meet this challenge.

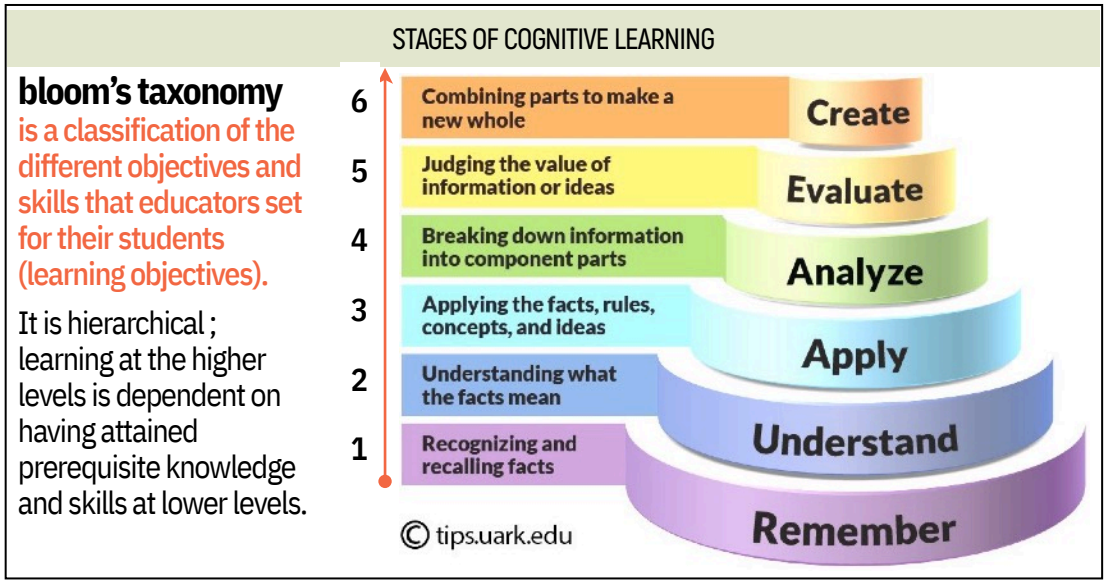
103.6. Activity Based Learning (ABL) was selected as method for teaching in the informal classroom and yet produce the outcomes required from the industry-driven OBE system.

200 | FRAMEWORKS
LEARNING IN THE DIGITAL AGE

201. BLOOMS TAXONOMY (REVISED 2001)

201.1. In the classical tradition, Blooms taxonomy has been the foundation to develop an education method. Originally created during the analogue age, it was adapted in 2001 for the digital. The Analogue was predictive. The Digital is adaptive. Students must learn to adapt and innovate rather than carry a body of knowledge. Learning is classified in a series of successive stages that build up to *higher level thinking*. Educator use this schema as a planning and delivery tool for their programs.

BLOOMS TAXONOMY (REVISED 2001) ADAPTED FOR FOR DIGITAL INQUIRY


STAGES OF COGNITIVE LEARNING
bloom's taxonomy
is a classification of the different objectives and skills that educators set for their students (learning objectives).
It is hierarchical ; learning at the higher levels is dependent on having attained prerequisite knowledge and skills at lower levels.
6
Combining parts to make a new whole
Create
5
Judging the value of information or ideas
Evaluate
4
Breaking down information into component parts
Analyze
3
Applying the facts, rules, concepts, and ideas
Apply
2
Understanding what the facts mean
Understand
1
Recognizing and recalling facts
Remember
© tips.uark.edu

BLOOMS TAXONOMY KEYWORDS

Stage		Keywords (verbs)
6	create	Designing, Constructing, Planning, Producing, Inventing, Devising, Making, Programming, Timing, Animating, Blogging, Idea Blogging, Mixing, Remixing, Wiki-Ing, Publishing, Video-Casting, Podcasting, Directing, Broadcasting
5	evaluate	Checking, Hypothesising, Critiquing, Experimenting, Judging, Testing, Detecting, Monitoring, (Blog), Commenting, Reviewing, Posting, Moderating, Collaborating, Networking, Reflecting, (Alpha, &, Beta), Testing, Validating.
4	analyse	Comparing, Organising, Deconstructing, Attributing, Outlining, Finding, Structuring, Integrating, Mashing, Linking, Reverse-Engineering, Cracking, and, Mind-Mapping.
3	apply	Implementing, Carrying, out, Using, Executing, Running, Loading, Playing, Operating, Hacking, Uploading, Sharing, Editing
2	understand	Interpreting, Summarising, Inferring, Paraphrasing, Classifying, Comparing, Explaining, Exemplifying, Advanced, Searches, Boolean, Searches, Blog, Journalling, Twittering, Categorising, and, Tagging, Commenting, Annotating, Subscribing.
1	remember	Recognising, Listing, Describing, Identifying, Retrieving, Naming, Locating, Finding, Bullet, Pointing, Highlighting, Bookmarking, Social, Networking, Social, Bookmarking, Favouriting/Local, Bookmarking, Searching, Googling.

202. THE 3 AXIS MODEL OF UNIVERSITY OF RHODE ISLAND (URI)

202.1. University of Rhode Island (URI), Providence, USA (Julio Corio, School of Education and Renee Hobbs, Harrington School of Communication and Media) has developed a new framework for modern times, where students are encouraged to learn by inquiry using digital platforms. It is a student-led approach versus the outdated model of a teacher-led blackboard classroom. 3 axes are proposed:
1) Personal Digital Inquiry (PDI)
2) Project Based Inquiry (PBI)
3) Digital and Media Literacy (DML)

202.2. Students, in a digital age classroom, create their own learning experience. Termed as 'Personal Learning', it is different from personalised learning.

PERSONAL LEARNING VS. PERSONALISED LEARNING:

- "Personalised" is about a top-down designed or tailored approach to learning; customised for the student, but still controlled by the teacher (serve up learning based on a formula of what a child needs)
- "Personal" is something human where the learner initiates and controls parts or all of the learning process; often emerges from engagement with others about one's personal wonderings.

202.3. Student engagement is a challenge faced by any progressive classroom where *personal freedom* matters. Life long learning and individual choice is the mandate, otherwise we will tend to lose students emotionally and physically.

202.4. Optimistic Findings reported by various agencies show that:

- If we engage learners with rigorous academic content and expect them *to know why, when, and how to apply knowledge to answer questions and solve problems*, then we can "lessen the achievement gap in ways that lead to positive adult outcomes for more young people" (National Research Council, USA, 2012)
- High school students engaged in *deep, relevant, and personal* (student-driven) learning opportunities demonstrated higher levels of interpersonal and intra-personal skills. (American Institutes for Research, 2014) and achieved better outcomes in every aspect of life, including academic, career, civic, and health (Center for Public Education, 2009)

202.5. The foundation of a personal learning experience is the classroom culture.

COMMUNITIES OF THINKING - HARPEZ AND LEFSTEIN (2000)

A classroom culture that values curiosity and honours student voices while encouraging choice, collaboration, problem solving, risk taking and reflection.

203. PERSONAL DIGITAL INQUIRY (PDI):

203.1. URI Framework for Personal Digital Inquiry proposes 4 sets of core practices for creating a 'Culture of Inquiry' in a digital age.

PERSONAL DIGITAL INQUIRY (PDI) FRAMEWORK (J. COIRO, J. CASTEK, AND D. QUINN, 2016)
PDI seeks to help teachers envision ways of designing personal digital inquiry experiences that foster **collaborative discussions** and **reflection** that, in turn, lead to **knowledge building, knowledge expression**, and **personal action**.

The four essential elements of a productive personal digital inquiry project include (1) regular opportunities for every learner to inquire, (2) collaborate and discuss, (3) participate and create, and (4) analyse and reflect. Learners may move through these opportunities in varied sequences with varied amounts of support, but successful inquiry-based projects make room for all four sets of practices.

The PDI framework situates classroom inquiry experiences within one of four gradually less restrictive levels of support that teachers can use to encourage inquiry-based learning while also accomplishing curricular or participatory learning outcomes; these levels of inquiry move from **modelled** and **structured** inquiry where teachers do most of the planning and then from **guided** inquiry to **open** inquiry where students take on more responsibility for the direction of their inquiries. As you choose to integrate digital texts and tools into your classroom inquiries, the planning guide below can help you make intentional choices about technology use, depending on the project learning outcomes and learning purposes.

© J. Coiro, J.Castek, D.Quinn
Univ. of Rhode Island, Providence

PERSONAL DIGITAL INQUIRY
Student Centred Inquiry Practices
How will students actively engage with learning outcomes across different stages of inquiry?
4 sets of underlying core practices
- true inquiry leads to critical analysis, self monitoring and more questions
- creative learners make personal connections and take action to build awareness and/or foster change. "I can make a difference"
- learning is a mutually constructive process with face-to-face talk.
- generating questions and lived experiences with real issues are personally fulfilling; inquiry can happen on several levels.

203.2. Wonder and Discover: There are varied Levels of [digital] inquiry - Alberta Inquiry Model of Inquiry Based Learning (2004):

- Modelled: Students observe models of how the leader asks questions and makes decisions;
- Structured: Students make choices which are dependent upon guidelines and structure given by the leader;
- Guided: Students make choices during inquiry that lead to deeper understanding guided by some structure given by the leader;
- Open: Students make all of the decisions. There is little to no guidance.

FERTILE QUESTIONS (HARPEZ AND LEFSTEIN (2000) COMMUNITIES OF THINKING)
OPEN: there are several different or competing answers.
UNDERMINING: makes learners question their basic assumptions.
RICH: can only be answered with careful and lengthy research; usually able to break into sub-questions.
CONNECTED: relevant to the learners
CHARGED: has an ethical dimension
PRACTICAL: is able to be researched given available time and resources

203.3. Collaborate and Discuss:

- Social Practices: request and give information; jointly acknowledge, evaluate, and build on partner's contributions;
- Cognitive Strategies: read, question, monitor, repair, infer, connect, clarify, and interpret;
- Socially Constructed Meaning (= Cognitive engagement) leading to a deep understanding;

203.4. Create and Take Action:

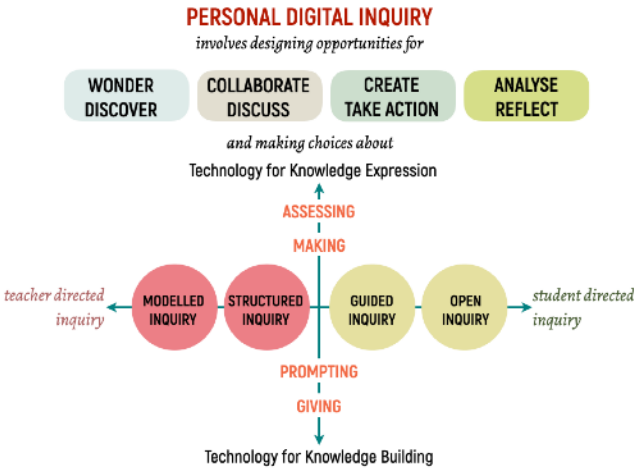
- Discussion, Research, Composition and Revision;
- Community action and mobilisation

203.5. Analyse and Reflect

- Before, during and after inquiry;
- Building conceptual understanding;
- Close reading and viewing to actively build knowledge;
- Reflection as assessment AND peer teaching as a form of creating and taking action (increasing awareness)

PERSONAL INQUIRY PLANNER © University of Rhode Island, Providence	
learning outcomes	describe the measurable skills, abilities, knowledge or values that students should be able to demonstrate as a result of a completing a course. They are student-centred rather than teacher-centred; they describe what the students will do, not what the instructor will teach.
INQUIRY PRACTICE | STUDENT LEARNING EXPERIENCE	
wonder and discover	• What experiences and content will students engage with to activate and extend their intellectual curiosity? • What texts and tools might students use as they generate their wonderings and discover more about their inquiry topic?
collaborate and discuss	• How will students collaboratively engage in joint conversations with others around their shared interests? What texts and/or tools might students use as they discuss their interpretations, make connections, and negotiate differences in opinion about their inquiry topic?
create and participate	• How will learners express their interests and new understandings through creative and collaborative work using texts, tools and technologies? • How might they be encouraged to use their creative learning products to start conversations, raise awareness, take action, or change minds in their learning community or beyond?
analyse and reflect	• How will learners analyse content to build their understanding of challenging information and reflect on their choices at multiple points in their inquiry process? • What texts, tools, and technologies will learners use to support their analysis and reflection?
EVALUATION | ASSESSMENT AND REFLECTION	
evidence of success	• How will you know the lesson is successful? • Describe some elements of student work (before, during and after) that you might use to assess their performance in relation to the project's learning outcomes.
learner feedback	• How will you offer feedback to learners to support their learning process?
your expectations	• Explain why you expect that this lesson will have value to learners and make some predictions about how students will respond.
reflection	• Each student shares a link to a weekly video reflection that summarises their reflection on the learning experience. Students write in their learning notebooks.

The Personal Digital Inquiry (PDI) Framework can serve as a springboard to inspire ideas for engaging learners in the full range of digital inquiry practices while intentionally planning for how students use technology to acquire, build, express, and assess the knowledge gained during their inquiry.



© University of Rhode Island - Providence

204. PROJECT BASED INQUIRY (PBI)

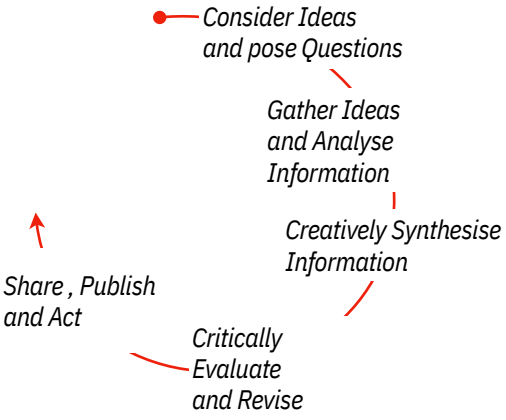
204.1. Project work is now a common method of learning in most classrooms. A robust framework has been extensively documented for the PBI method.

WHY USE PROJECT-BASED INQUIRY? URI-PROVIDENCE

The aim of the project-based approach is to provide the opportunity for students to engage in authentic intellectual work described as, the **"construction of knowledge through disciplined inquiry in order to produce products that have value beyond school"**.

Through a focus on authentic intellectual work, we aim to engage students in learning opportunities that connect to their world. Likewise, elements of project-based inquiry possess what John Dewey referred to as **productive inquiry**, which is *"that aspect of any activity where we are deliberately (although not always consciously) seeking what we need in order to do what we want to do"*.

Our aims are to engage students in intellectual work that has depth, duration, and complexity, and to challenge and motivate students toward knowledge creation that is creative and innovative.


Consider Ideas and pose Questions
Gather Ideas and Analyse Information
Creatively Synthesise Information
Critically Evaluate and Revise
Share , Publish and Act

PBI is a process for posing and responding to questions. At the heart of the PBI process is **inquiry**. **The PBI model we are featuring at the Institute focuses on questioning, gathering information, creatively synthesising information, evaluating, and finally sharing their product of learning.**

The starting point is developing a compelling question. So, *what makes a question a good question?*

Open: is imaginative and leaves room for creativity. It should not have an immediate answer.
Rich: inspires students to think more and gives them the responsibility to solve the problem.
Diverse: assimilates new perspectives and recognises the multiplicity of possible responses.
Connected: addresses issues that stimulate students' curiosity in ways that matter to them.
Collaborative: encourages students to interact directly with one another.
Personal: might be shaped by a series of "*I wonder...*" statements generated by students.

205. DIGITAL AND MEDIA LITERACIES (DML)

205.1. Being literate takes on a new meaning in the digital context. We are dependent on digital media. Julie Coiro, School of Education, University of Rhode Island [https://web.uri.edu/education/meet/julie-coiro/], defines Digital Literacy as:

DIGITAL LITERACY. JULIE COIRO, URI-PROVIDENCE

Digital Literacy is having the **skills, strategies, and dispositions** to use the Internet productively to:

- Generate useful questions to solve problems
- Locate information
- Critically evaluate information
- Synthesise information
- Communicate answers/solutions

205.2. Renee Hobbs, Harrington School of Communication and Media University of Rhode Island [https://harrington.uri.edu/meet/renee-hobbs/], extends this further to the idea of Digital Authorship.

DIGITAL AUTHORSHIP: A PEDAGOGY OF LEARNING. RENEE HOBBS, URI-PROVIDENCE

Digital authorship is a form of social power. Digital authors enter into conversation with others in the culture when they choose to share their creative work. Digital authorship is a creative and collaborative process that involves experimentation and risk taking. People can choose whether (or not) to be socially responsible for the texts they create and share. Critical thinking about message form, content and context makes people better creators and consumers of digital and media messages.

Digital Authorship Enables the Practice of Citizenship When people have digital and media literacy competencies, they recognise personal, corporate and political agendas and are empowered to speak out on behalf of the missing voices and omitted perspectives in our communities. By identifying and attempting to solve problems, people use their powerful voices and their rights under law to improve the world around them. -Renee Hobbs, Digital and Media Literacy: A Plan of Action, 2010

---

206. CONNECTIONS BETWEEN THE FRAMEWORKS

206.1. PDI: The Personal Digital Inquiry framework is a planning tool to build a classroom culture that values and makes time for *inquiry, collaboration and dialogue, participation + action, and reflection* in any learning community.

206.2. PBI: Project-Based Inquiry channelises students to learn by *doing* in a practical context rather than memorising a textbook, Students develop digital age literacies as well as use digital media texts, tools, and technologies to learn challenging content. The key elements of the process are: to engage students with developing a relevant research question, working collaboratively in teams to *gather, analyse, and synthesise* their learnings and share their project findings with other students.

206.3. DML: Digital and Media Literacy expands the idea of literacy to how we use, consume and create messages in many forms. It emphasises the practices of *reflection and action* in order to put "new literacy" practices in a larger social and political context.

207. EDUCATION PEDAGOGY AND PSYCHOLOGY

207.1. Adults learn by motivation rather than imitation. Motivation, to better one's wellbeing and of the family, is amplified when student needs and expectations are met. So the delivery must be customised at an individual level. The responsibility for this *personal* customisation rests with the student. But the learning path for this student journey is initially created by, and thereafter *contained* by the educators.

207.2. Any learning group will operate within 6 boundaries as per the study of group psychodynamics. These are co-held by the adult learner and faculty. Exercise of one's personal authority to participate in the designated role as both member of the large group and as a self-learner is an *informed choice*.

BOUNDARIES OF ANY LEARNING GROUP

(Pioneering Research in Group Psychodynamics in the Tavistock Model of Group Relations - U.K, at A.K. Rice Institute for the Study of Social Systems - USA and at the Group Relations Conferences, IIM-Ahmedabad.)

NO	BOUNDARY	DESCRIPTOR	APPLIED TO
1	**TASK OF SYSTEM**	primary and secondary task	*Primary Task is the agreed task for the group learning. Secondary task is the observed task that the group is pursuing, in relation to the primary task.*
2	**SPACE**	spatial	*Defining a space of learning: physical, and online.*
3	**TIME**	temporal	*Time in and time out for the created space.*
4	**TECHNOLOGY**	method, mode of working	*The specific way of learning, the flipped classroom, vocabulary, analogue and digital tools for learning.*
5	**UNDERSTANDING**	learner's understanding of the boundaries	*Clarity of the system, boundaries and the pedagogy employed . Roles played by faculty, students, stakeholders. Systemic expectations on the learner.*
6	**SENTIENCE**	engagement to work together for the task	*Internal drive to engage with the primary task, internal to the individual and at the group level.*

207.3. The learning experience with these boundaries could be envisioned as being held together within a Matrix. The role of a Matrix is two-fold – to nourish the body and to regenerate the spirit. The '*classroom is a matrix*', as the 'organisation-in-the-mind', not only meets the expectations of skill training but also satisfies the need to mobilise the human development potential - the *efflorescence* of the human being and role clarity for the new-age teacher.

207.4. Integrative education psychology posits the 3-fold human being:

THE 3 DOMAINS OF LEARNING

The Cognition	*thinking*	knowledge building	**Knowledge**
The Affective	*feeling*	values, judgement	**Abilities**
The Psychomotor	*doing*	physical movement	**Skills**

207.5. An overlapping domain gaining attention is the CONATIVE domain.

CONATIVE DOMAIN

Conation is defined as the mental process that activates and/or directs behaviour and action. Various terms used to represent some aspect of conation include intrinsic motivation, goal- orientation, volition, will, self-direction, and self-regulation.

Some of the conative issues one faces daily are:

- What is my life's purpose and are my actions congruent with that purpose?
- What are my aspirations, intentions, and goals?
- On what ideas, objects, events, etc. should I focus my attention?
- What am I going to do, what actions am I going to take, what investments am I going to make?
- How well am I accomplishing what I set out to do?

Developing knowledge, attitudes, and skills associated with conation, especially self- regulated learning skills, will be increasingly important to success as the 21st century continues.

207.6. The learning space design must take up the challenges of this deep learning for the student and yet not enforce set targets like a fixed time period for learning outcomes or high entry barriers. Then the learning journey is experienced with *a sense of freedom* and with freedom comes the motivation for an adult learner for *self actualisation*.

208. OUTCOME BASED EDUCATION (OBE)

208.1. OBE is a game changer for India and the developing economies.

MOVING FROM ENROLMENTS TO OUTCOMES

(Sourced: Amit Kapoor, Chair, Institute for Competitiveness).

The world around us is changing at breath-taking speed and so are the nature of jobs that such a transformation entails. Policymakers need to ask themselves if policies are keeping pace with the changes that such rapid developments thrust upon us. More importantly;

Are higher education policies focussing on the right goals to achieve the skilling that industry requires?
The most important indicator of educational progress is easily the **Gross Enrolment Ratio** (GER). At present, at the higher education level, GER stands at a little over 24 per cent. There is also a class and gender-disparity in these figures, although the situation is improving in the latter case.

However, GER is a very narrow indicator of educational performance when seen in light of the rapidly-changing industry trends. Enrolling more students in institutes of higher education seems irrelevant if they are not being provided skills that are commensurate with the changing times.
Therefore, there is an urgent need to shift from input-based indicators of educational progress like GER to an outcome-based approach. India's unrivalled youth demographics make such a shift all the more important and urgent for the country.

OUTCOMES WILLIAM G. SPADY AND KIT J. MARSHALL

Outcomes are **clear, observable demonstrations of student learning** that occur after a significant set of learning experiences. They are not values, attitudes, feelings, beliefs, activities, assignments, goals, scores, grades, or averages, as many people believe.

Typically, these demonstrations, or performances, reflect three things:

1. what the student knows;
2. what the student can actually do with what he or she knows;
3. the student's confidence and motivation in carrying out the demonstration.

A well-defined outcome will have clearly defined content or concepts and be demonstrated through a well-defined process beginning with a directive or request such as 'explain', 'organise', or 'produce'.

208.4. The "Essence" of Outcome based learning (OBL):

- In OBL, what matters is not what is taught, but *what is learnt*;
- Teachers must set appropriate course *learning outcomes*, instead of teaching objectives;
- Constructive alignment: What we teach, how we teach and how we assess ought to be aligned with the intended learning outcomes, such that they are fully consistent with each other;
- The quality of teaching is to be judged by the quality of learning that takes place;
- All OBL approaches take a criterion-based view of assessment and focus on what students *can do with knowledge* after a period of learning.

208.5. Indian Agencies for the implementation of OBL:

1. National Board of Accreditation (NBA): [https://www.nbaind.org] is an autonomous body with the objective of assurance of quality and relevance of education, especially for professional and technical disciplines, i.e., Engineering and Technology, Management, Architecture, Pharmacy and Hospitality. A process of accreditation is mandated for programs. India is a full signatory to the Washington Accord, a consortium of 21 full member states and 7 provisional signatory countries that will work towards an outcome based assessment for professional engineering undergraduate academic degrees.

   Graduates of accredited programs in any of the signatory countries are recognised by the other signatory countries as having met the academic requirements for entry to the practice of engineering. Recognition of accredited programs is not retroactive but takes effect only from the date of admission of the country to signatory status.

2. The Indo Universal Collaboration for Engineering Education (IUCEE): [https://iucee.org/], with headquarters at University of Massachusetts - Lowell, was conceptualised by Dr.Krishna Vedula and over 150 leaders of engineering education and businesses from US and India in 2007. The vision of IUCEE is to improve the quality and global relevance of engineering education and research in India and related benefits to US engineering educators, with focus on faculty development, student development, curriculum development, as well as improved teaching technologies and research.

300 | APPROACH
THE EMERGENT ACTIVITY BASED LEARNING

301. DEVELOPMENT OF ACTIVITY BASED LEARNING METHOD (ABL)

301.1. In 2016, after our study of innovative education pedagogy, at the Rhode Island University, Providence and design thinking for educators at the Henry Ford Design Institute, Detroit, we began design of our transformed ABL method. Originally developed at Rishi Valley Rural Education Centre, Krishnamurti Foundation India, it was in 1997, that we were introduced to ABL at the Isaiambalam School, Auroville, Tamil Nadu. *The success of this low-cost method prompted the Tamil Nadu Govt to adopt it for its public schools. By 2006 – 2008, ABL was scaled up to all 35,000 government and aided primary schools of Tamil Nadu.*

302. THE DYNAMICS OF A TEACHER-LED NON FORMAL CLASSROOM.

302.1. Large Group Size: With no outer limit to class strength, a group of 30 could easily expand to becoming a public group with bystanders forming an outer ring, others being being asked to 'join in'. The facilitator is left de-skilled in carrying out the task. This is also reflected in class strengths in formal education classrooms.

Large learning group - beyond teacher's capacity to manage.

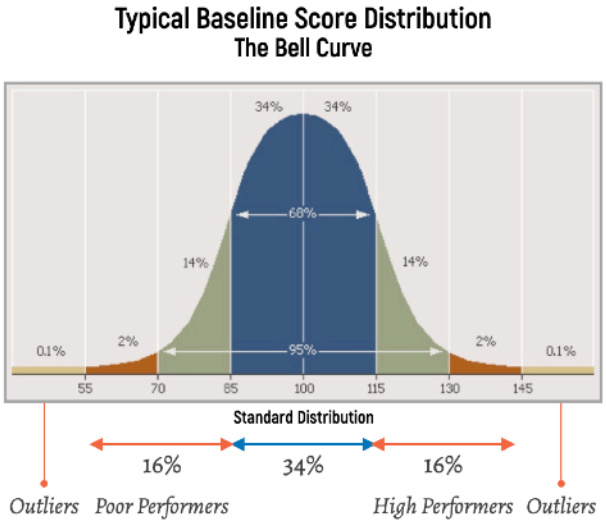
No personal attention is possible. Individualisation missing. Batch processing.

CLASS STRENGTHS IN HIGHER EDUCATION COURSES	
IIT Kharagpur	95
Govt. Medical College, Nagpur	100
Govt ITI	80

302.2. Wide Range in Baseline Skills: With low entry barriers in terms of scholastic competencies, baseline assessments shows a wide range. The outliers are dispersed on long tails of the bell curve.

Wide range in student baseline skills assessment in the classroom.

Where to pitch the lesson ?
Outliers at both ends of the bell curve get left out.



302.3. Non Standardised Learning Material: Some agencies produce a training manual and others rely on distribution of photocopies of chapters from a textbook, some images or just expect students to make their own notes from the blackboard. As a consequence, students resort to study guides and solved question papers as their learning material.

No standardised learning material except prescribed textbook.

Teacher's class notes, '21 model questions' and cheat notes have replaced textbooks.

302.4. Dynamic Class Strength is Disruptive: The learning group strength is *dynamic* - some attendees are late in joining, others have to depart before the conclusion of the training or just fall sick as they cannot face the challenge of intellectual work. Many have inadequate formal learning experience and are drop-outs from school.

Students join classroom at different times latecomers, absenteeism. Dynamic population demographics.

In the set sequence of lesson delivery, latecomers, absentees and laggards are dragged along with build up of incomprehension.

302.5. Syllabus Can Never Be Completed: Curriculum developers stuff their syllabus with content. With a disconnect between student abilities and learning outcomes, the syllabus is rarely completed and the last portion is rushed through, leaving many behind.

Dumping on students. Syllabus never completed on time. Stuffed and packed.

In the later part of the course, teacher rushes through the lessons, students get left behind.

303. A MULTI-MODAL ACTIVITY BASED LEARNING SOLUTION

303.1. To set out the method, some meta-level principles are as follows:

1. The challenge is *to work with* the dynamics of a non-formal class and work towards delivering a learning experience that meets the OBE metrics set for the graduate attributes.
2. The orientation is flipped to a student-led learning, customised *by the students* as per their specific objective of joining the training and obtaining the certification thereafter.
3. To develop a curriculum and a programmed learning journey, based on a syllabus set by an external agency, is a specialised skill - both in terms of content and sequence. This is a new role for a *curriculum developer*.
4. The Teacher's role is transformed to that of *a facilitator*. The role has scope for local customisation of the training and use of vernacular language to clarify difficulties and understand concepts.

DARE TO THINK THE UNTHOUGHT KNOWN ? AJEET N. MATHUR. (2006)

The role of the teacher as a facilitator could be as a witness to the wonder with which questions are formulated, regardless of whether they are answered or answerable. If there is sufficient wonder, it is reasonable to expect that the questions of most worth will be raised and pursued, and perhaps along the way this would be the surest way to partake of knowledge of most worth as a by-product.

303.2. Managing Content and Delivery: The vast content is divided into manageable units of learning and a LEARNING PACKET is developed.

A learning packet is a unit of study over any given topic prepared for working independently, from the teacher and from the learning rate of the remainder of the class.

content + delivery

- Divide the learning matter into learning packets.
- Teacher role replaced by that of Facilitator.
- Replicable in any group.

303.3.The Class Space and Groups: Learning in community of cohorts.

classroom space + groups

- Class divided into 5 groups
- Community of Learning Cohorts
- All group dynamics are in play - Self , Small and Large Group

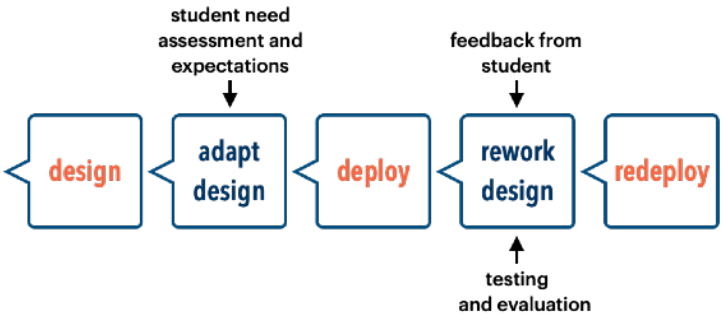
Cohort, as a student group, work through a curriculum together to achieve the same academic degree together. There is an expectation of richness to the learning process due to the multiple perspectives offered by the students.

Cohort	Scholastic Score
Teacher support	Poor performers at the long tail (left) of the bell curve, remedial track
Partial teacher support	Lagging behind the median values . In -34% zone.
Peer to peer group	Within the 68% middle range, normal cohort learners
Partial peer support	Upper range of the score distribution and need some collaboration (+34%)
Independent Learners	Highest scores and capable of self learning without teacher. Only assessment.

303.4.Self Learning and Assessment: Once the learning approach is flipped to a student-led learning process, some logical paths emerge:

1. Learning is considered as a life-long process that get initiated, nurtured or replenished in the present training. A chain of continuity is assumed.
2. The rubrics for life long learning and for the course are clearly discussed, negotiated and agreed upon between educators and student for an informed and transparent assessment process.

DOUBLE LOOP COURSE DESIGN PROCESS



3. The students are able to customise their experience with the aid of the modular packets of learning at a pace they are comfortable with and with the level of peer support (cohort learning) they wish to engage at.
4. Whilst the cognition and motor skills are being enhanced, equal attention is given to the Conative domain. Reflection is built into the journey by posing questions to engage learners, but not providing solutions.

self directed learning + assessment

- Learner responsible for learning not teacher
- Life Long learning rather than just immediate skill building
- Inner Space: Learning Notebook for reflection and evaluation
- Self assessment , peer assessment and stakeholder evaluation
- Individualisation customisation possible to meet unique needs and expectations
- Learning sequence envisioned as a learning journey
- Rubrics for assessment for transparency and learner motivation to excel
- Outcome based learning and not knowledge banking

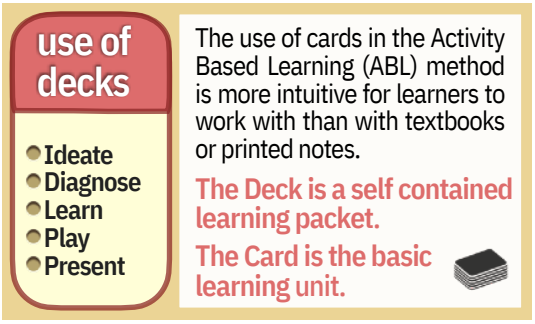
III - THE ACTIVITY LEARNING PEDAGOGY, METHOD AND TOOLS

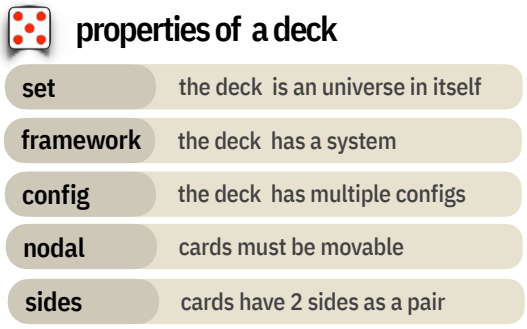
400 | SCHEMA
THE CARD AND DECK

401. THE METAPHOR OF CARD AND DECK FOR THE ABL METHOD

401.1. The most basic unit of learning is the CARD. It replaces instructional material in the form of textbooks or printed notes.

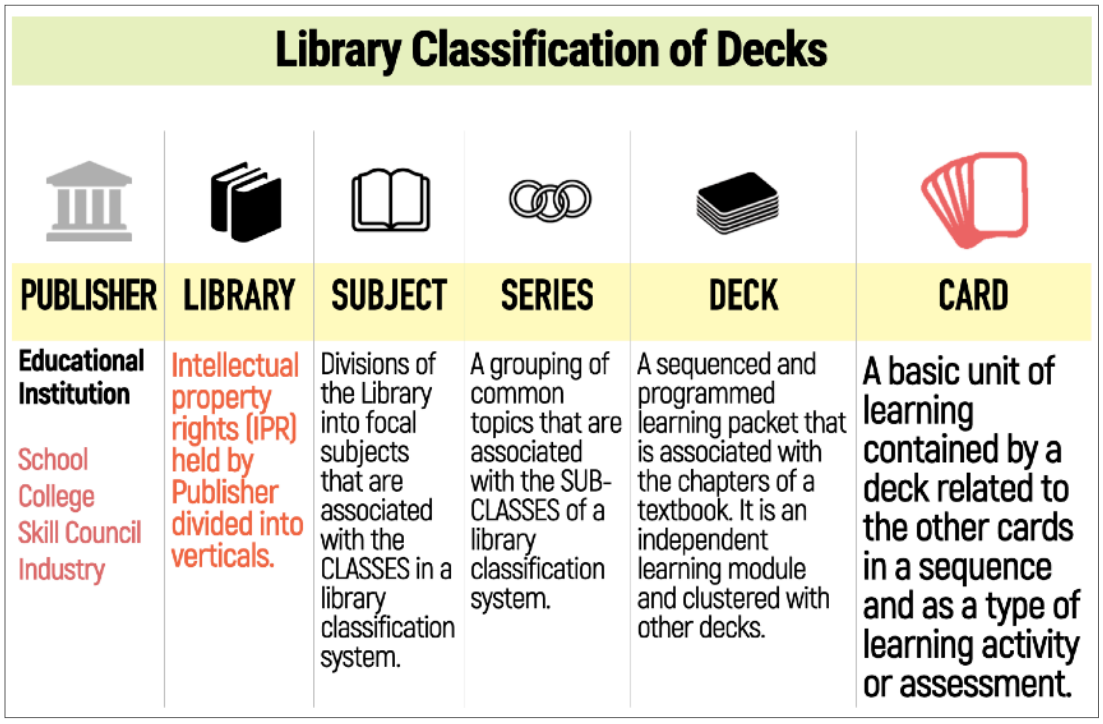
401.2. A DECK is a self-contained set of knowledge objects, activities and quizzes that will have a subject focus like the chapter of a textbook.

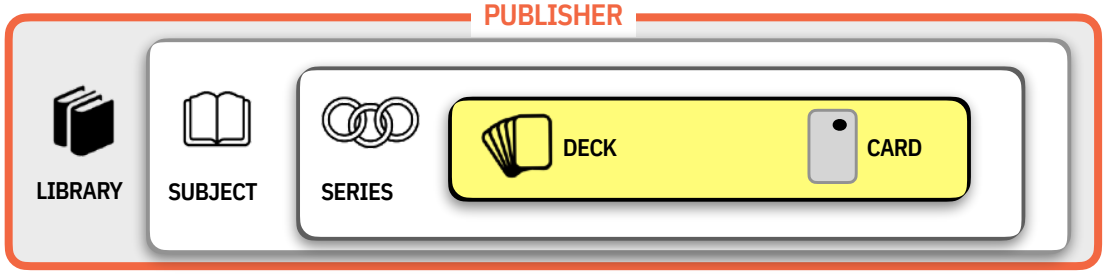

use of decks
Ideate
Diagnose
Learn
Play
Present
The use of cards in the Activity Based Learning (ABL) method is more intuitive for learners to work with than with textbooks or printed notes.
The Deck is a self contained learning packet.
The Card is the basic learning unit.



402. LIBRARY CLASSIFICATION AND SCHEMA

402.1. Any card must be classified in a library index so that it finds it place in the correct deck and can be retrieved from a library.


Library Classification of Decks
PUBLISHER
Educational Institution
School
College
Skill Council
Industry
LIBRARY
Intellectual property rights (IPR) held by Publisher divided into verticals.
SUBJECT
Divisions of the Library into focal subjects that are associated with the CLASSES in a library classification system.
SERIES
A grouping of common topics that are associated with the SUB-CLASSES of a library classification system.
DECK
A sequenced and programmed learning packet that is associated with the chapters of a textbook. It is an independent learning module and clustered with other decks.
CARD
A basic unit of learning contained by a deck related to the other cards in a sequence and as a type of learning activity or assessment.



403. CLASSIFICATION OF ACTIVITY TYPES

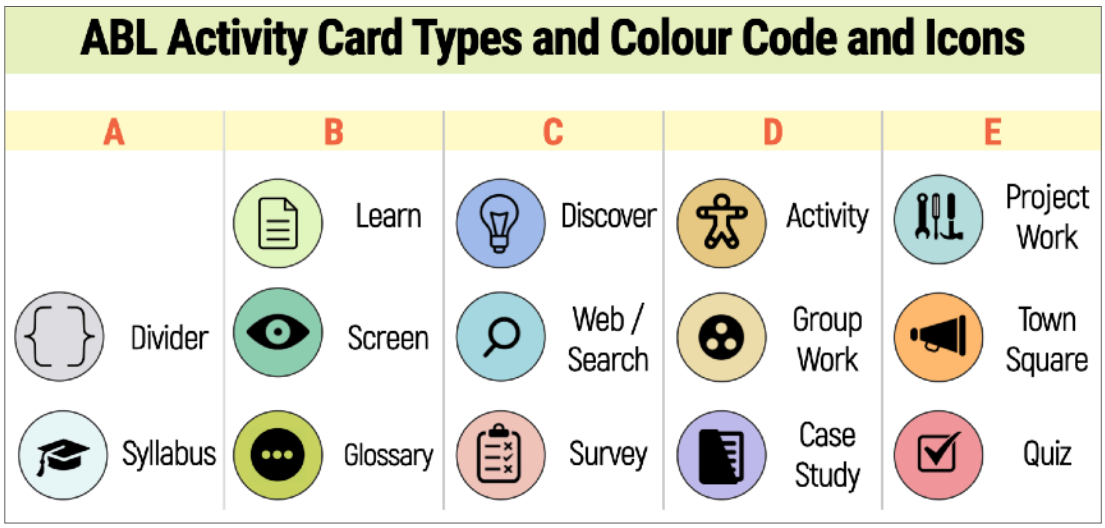
403.1. The core idea of our ABL Method is the ACTIVITY. Several innovative activities can now be grouped under classes that correspond to levels of learning as per the Blooms taxonomy.

GROUPS OF ACTIVITY TYPES AND BLOOM LEVELS

GROUP	No.	ACTIVITY	BLOOMS LEVEL		ABILITIES
GROUP A	1	DIVIDER	Module Container Outcome Based Education		*informed choice and transparency*
	2	SYLLABUS			
GROUP B	3	LEARN	**1** and **2**	1 - Remembering 2- Understanding	*1 - Recognising and recalling facts* *2- Understand what facts mean*
	4	SCREEN			
	5	GLOSSARY			
GROUP C	6	DISCOVER	**3** and **4**	3 - Apply 4 - Analyse	*3 - Applying the facts, rules, concepts and ideas* *4 - Breaking down information into component parts*
	7	WEB / SEARCH			
	8	SURVEY			
GROUP D	9	ACTIVITY	**3, 4** and **5**	3 - Apply 4 - Analyse 5 - Evaluate	*5 - Judging the value of information or ideas*
	10	GROUP WORK			
	11	CASE STUDY			
GROUP E	12	PROJECT WORK	**5** and **6**	5 - Evaluate 6 - Create	*5 - Judging the value of information or ideas* *6 - Combining parts to make a new whole*
	13	TOWN SQUARE			
	14	QUIZ			

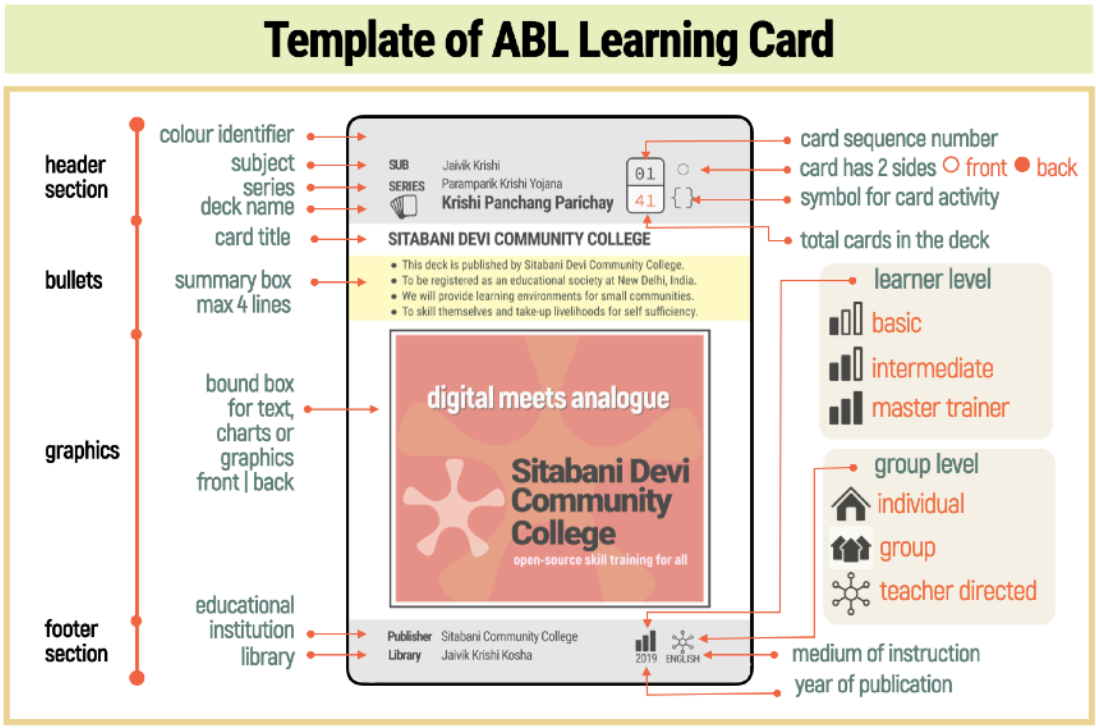
404. ACTIVITY COLOUR CODES AND ICONS

404.1. Having classified the 14 ACTIVITIES into 5 GROUPS, a SYMBOL LIBRARY has been created to associate a unique symbol to each activity. When these symbols are placed on a specific card, the recognition of the activity type is easier for the semi-literates who have developed an acute visual sense. A colour code for each activity type is also assigned.

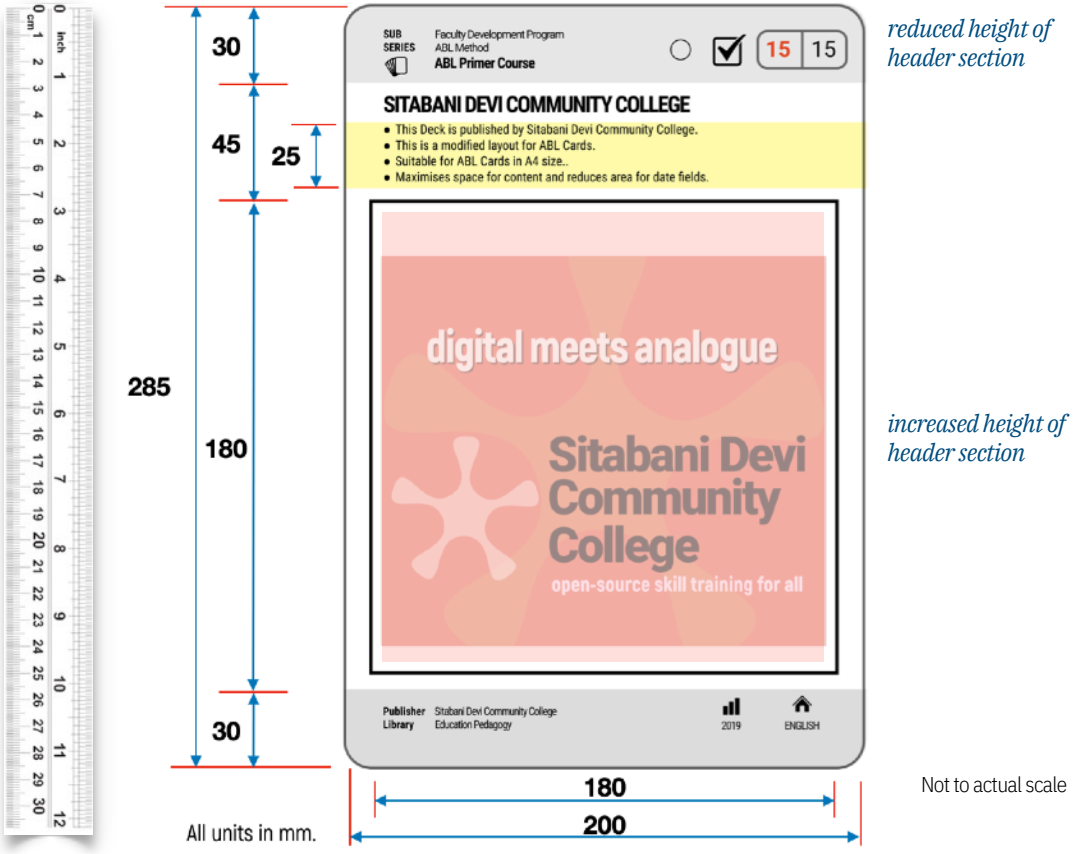


405. THE ABL CARD TEMPLATE

405.1. A card template with visual icons and graphics is created to standardise the layout of a card so that it can be populated by data.



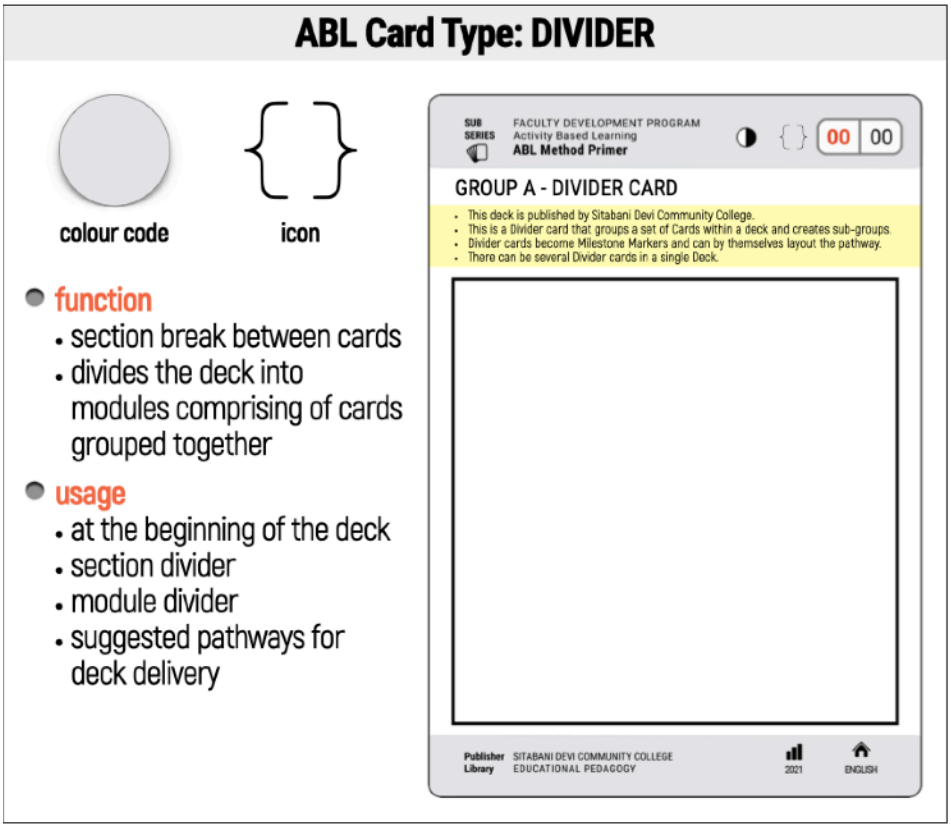
Modified Version for A4 size Cards. After preparation of several decks, it was found that the optimum size for a card is A4 (210mm x 297mm). A 2-UP print would allow for the front and back to be printed on an A3 printer and flipped over for another print (2 sets). For a 1-UP layout, print on an A4 colour printer back to back. Any inkjet printer could produce the cards. Colour Laser Printer with a 300gsm card stock gives best results.

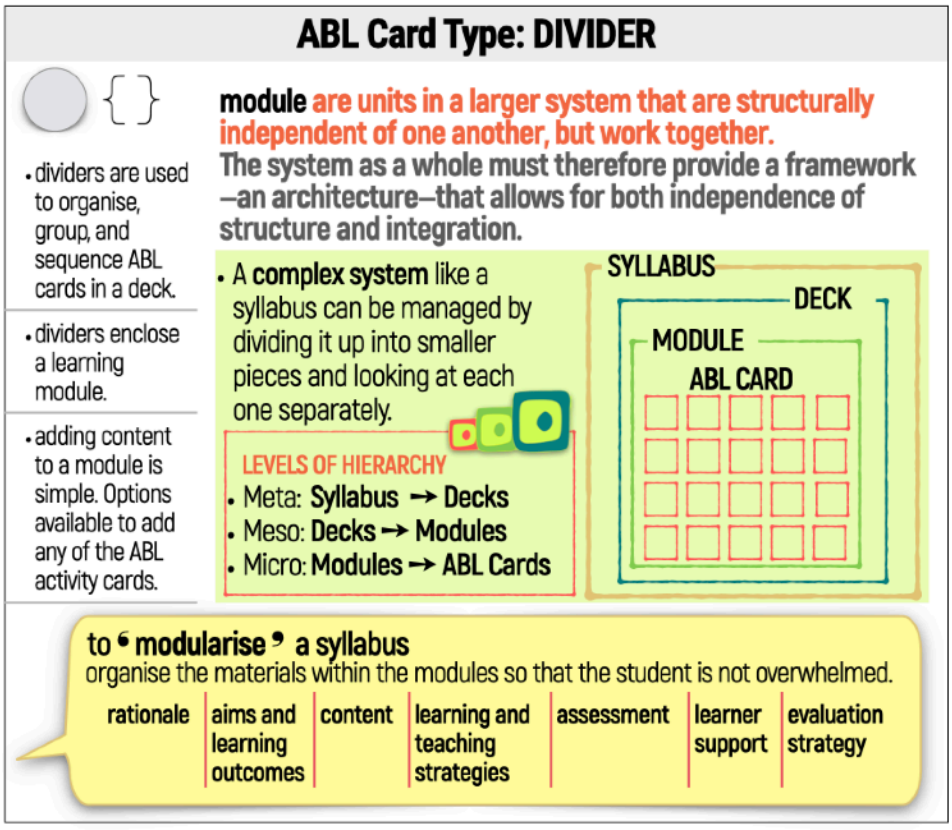


500 | METHOD
THE BUILDING BLOCKS FOR ACTIVITY BASED LEARNING

501. GROUP A: DIVIDER CARD

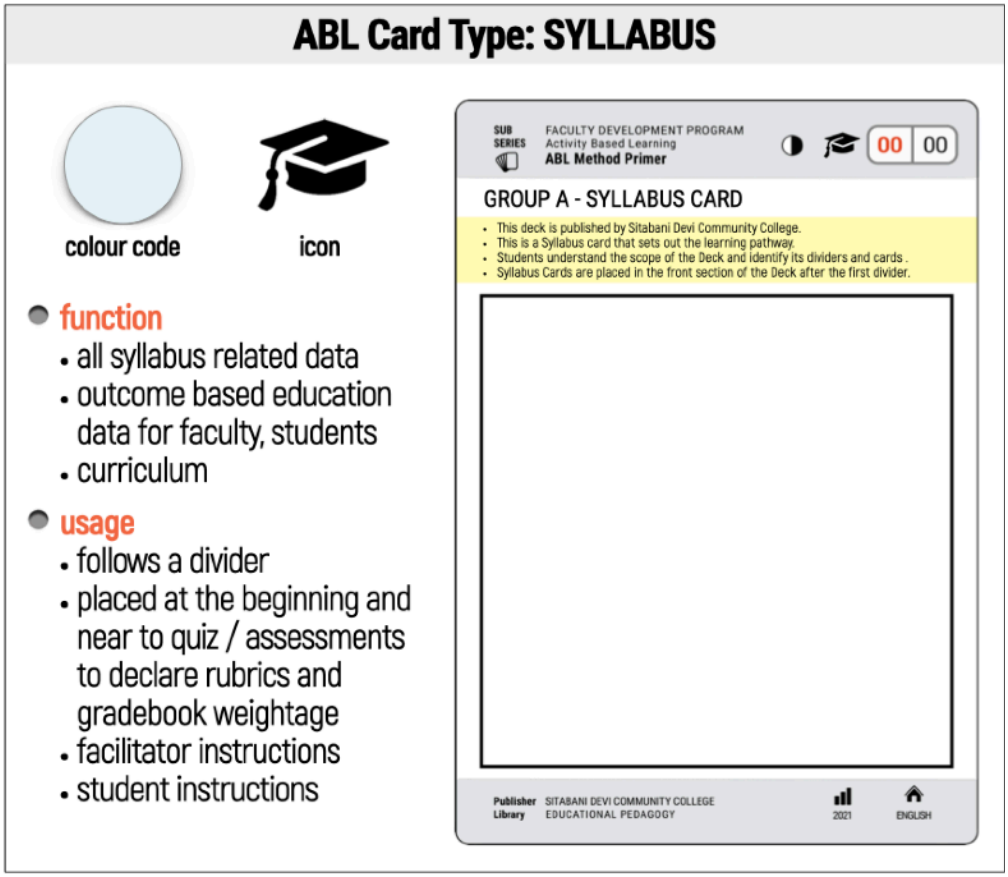
501.1. Divider Cards are physical dividers and milestone flags.

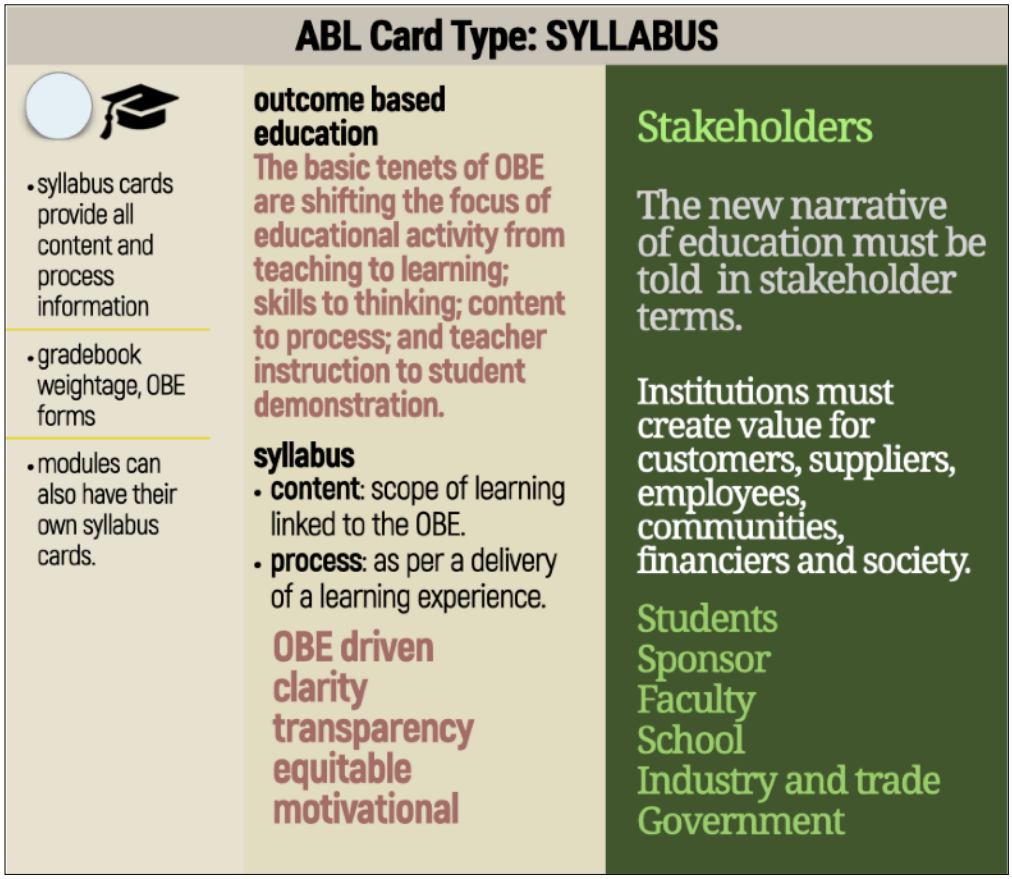

ABL Card Type: DIVIDER
colour code
icon
function
• section break between cards
• divides the deck into modules comprising of cards grouped together
usage
• at the beginning of the deck
• section divider
• module divider
• suggested pathways for deck delivery
SUB SERIES
FACULTY DEVELOPMENT PROGRAM
Activity Based Learning
ABL Method Primer
00 00
GROUP A - DIVIDER CARD
This deck is published by Sitabani Devi Community College.
This is a Divider card that groups a set of Cards within a deck and creates sub-groups.
Divider cards become Milestone Markers and can by themselves layout the pathway.
There can be several Divider cards in a single Deck.
Publisher SITABANI DEVI COMMUNITY COLLEGE
Library EDUCATIONAL PEDAGOGY
2021
ENGLISH


ABL Card Type: DIVIDER
• dividers are used to organise, group, and sequence ABL cards in a deck.
• dividers enclose a learning module.
• adding content to a module is simple. Options available to add any of the ABL activity cards.
module are units in a larger system that are structurally independent of one another, but work together.
The system as a whole must therefore provide a framework –an architecture– that allows for both independence of structure and integration.
• A complex system like a syllabus can be managed by dividing it up into smaller pieces and looking at each one separately.
LEVELS OF HIERARCHY
• Meta: Syllabus → Decks
• Meso: Decks → Modules
• Micro: Modules → ABL Cards
SYLLABUS
DECK
MODULE
ABL CARD
to 'modularise' a syllabus
organise the materials within the modules so that the student is not overwhelmed.
rationale
aims and learning outcomes
content
learning and teaching strategies
assessment
learner support
evaluation strategy

502. GROUP A: SYLLABUS CARD

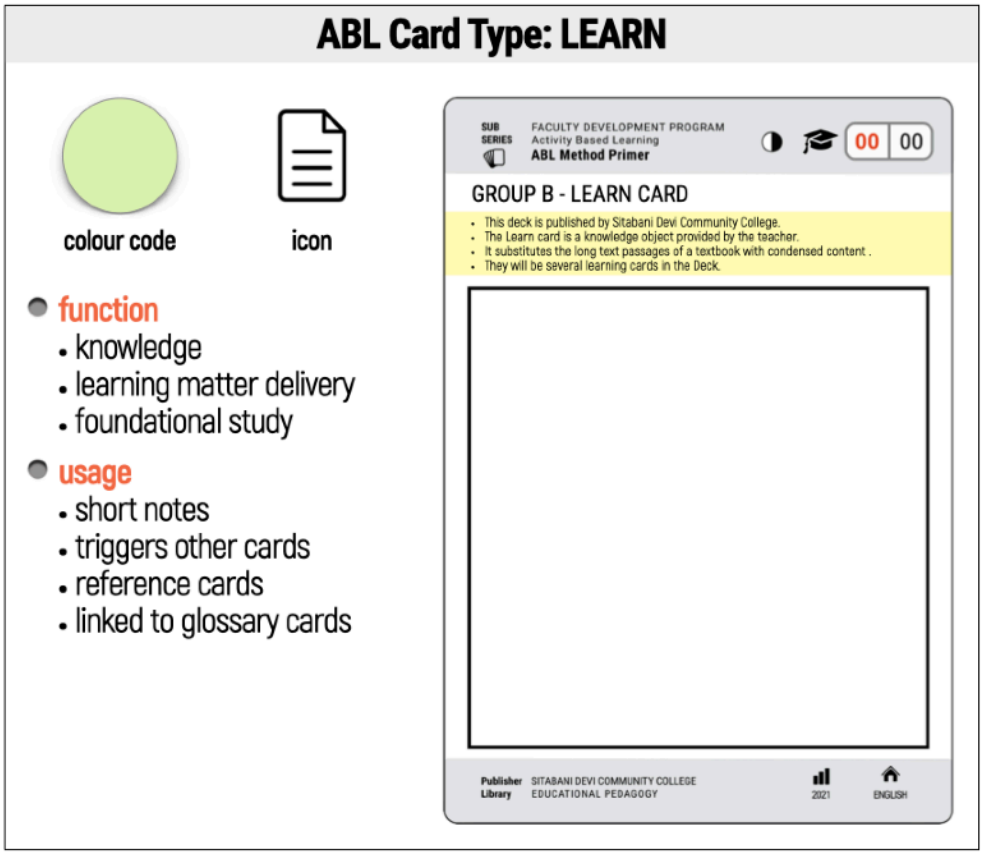
502.1.Syllabus card is the roadmap of the learning journey.

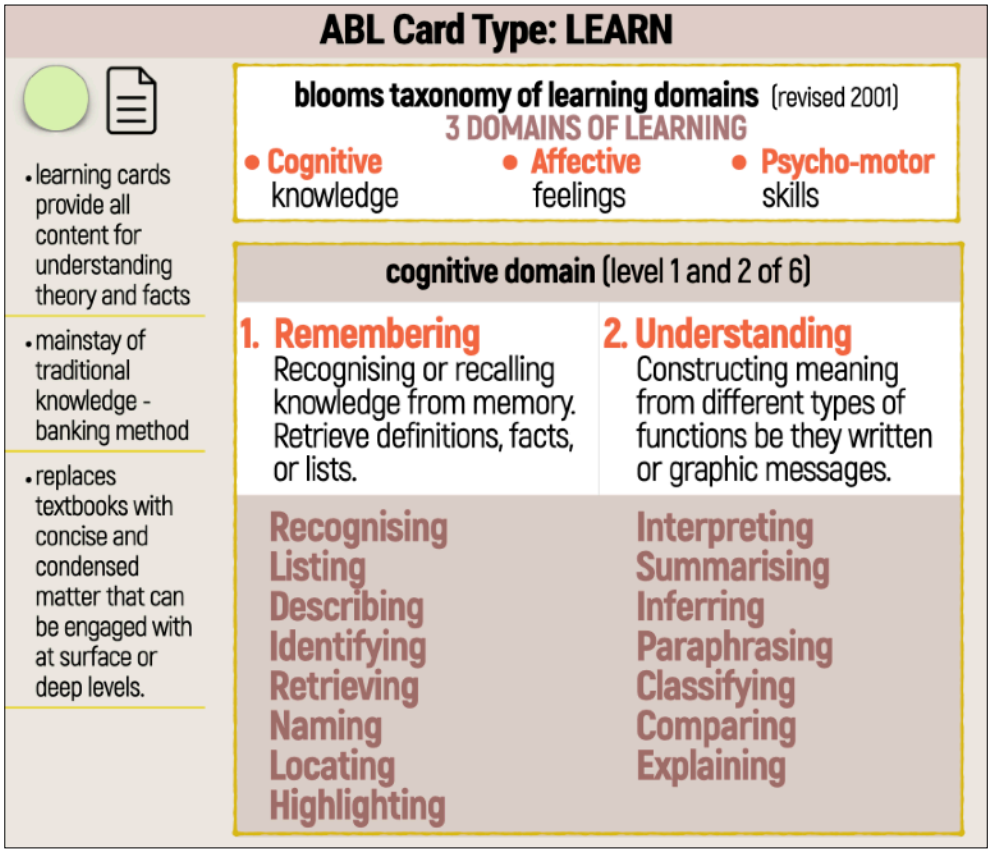

ABL Card Type: SYLLABUS
colour code
icon
function
all syllabus related data
outcome based education data for faculty, students
curriculum
usage
follows a divider
placed at the beginning and near to quiz / assessments to declare rubrics and gradebook weightage
facilitator instructions
student instructions
SUB SERIES
FACULTY DEVELOPMENT PROGRAM
Activity Based Learning
ABL Method Primer
00 00
GROUP A - SYLLABUS CARD
This deck is published by Sitabani Devi Community College.
This is a Syllabus card that sets out the learning pathway.
Students understand the scope of the Deck and identify its dividers and cards .
Syllabus Cards are placed in the front section of the Deck after the first divider.
Publisher SITABANI DEVI COMMUNITY COLLEGE
Library EDUCATIONAL PEDAGOGY
2021
ENGLISH


ABL Card Type: SYLLABUS
syllabus cards provide all content and process information
gradebook weightage, OBE forms
modules can also have their own syllabus cards.
outcome based education
The basic tenets of OBE are shifting the focus of educational activity from teaching to learning; skills to thinking; content to process; and teacher instruction to student demonstration.
syllabus
content: scope of learning linked to the OBE.
process: as per a delivery of a learning experience.
OBE driven
clarity
transparency
equitable
motivational
Stakeholders
The new narrative of education must be told in stakeholder terms.
Institutions must create value for customers, suppliers, employees, communities, financiers and society.
Students
Sponsor
Faculty
School
Industry and trade
Government

503. GROUP B: LEARN CARD

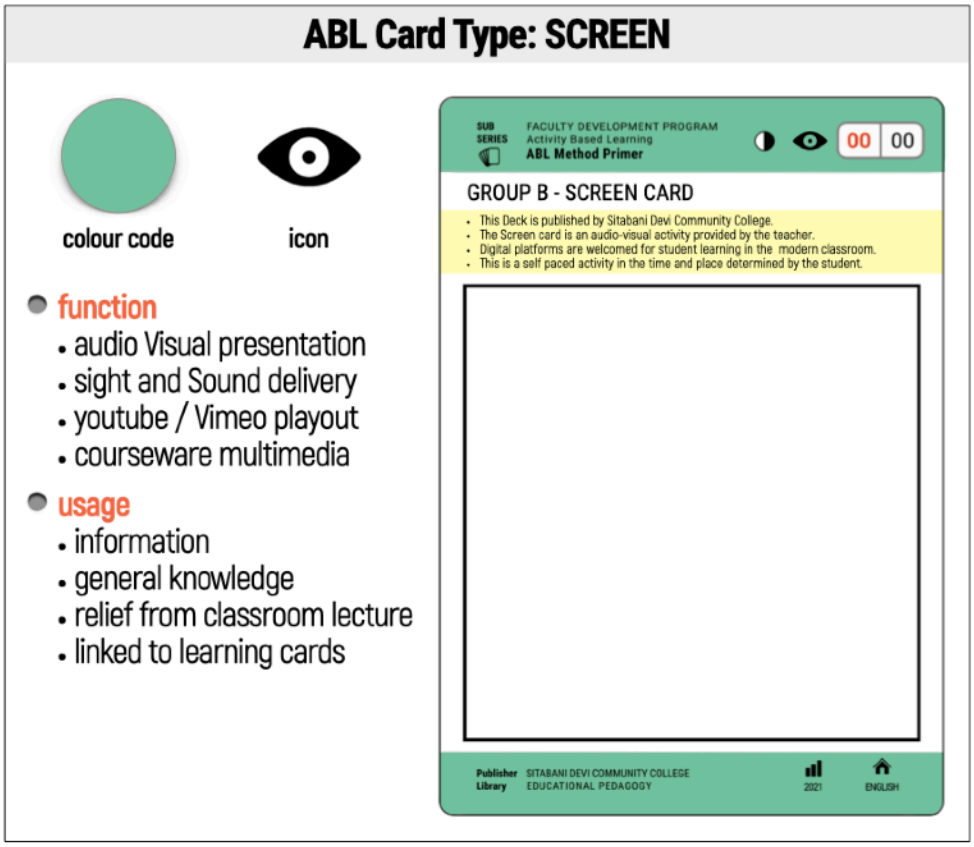
503.1. The Learn card is a foundational 'knowledge object'.

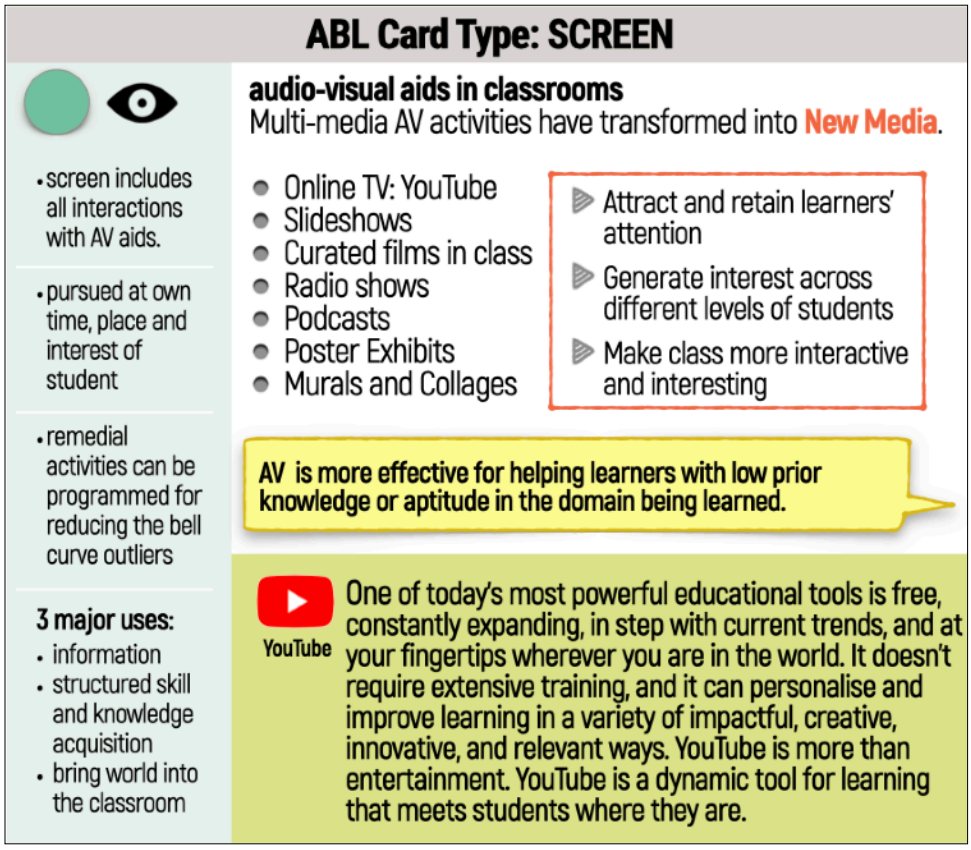

ABL Card Type: LEARN
colour code
icon
function
• knowledge
• learning matter delivery
• foundational study
usage
• short notes
• triggers other cards
• reference cards
• linked to glossary cards
SUB SERIES
FACULTY DEVELOPMENT PROGRAM
Activity Based Learning
ABL Method Primer
00 00
GROUP B - LEARN CARD
• This deck is published by Sitabani Devi Community College.
• The Learn card is a knowledge object provided by the teacher.
• It substitutes the long text passages of a textbook with condensed content .
• They will be several learning cards in the Deck.
Publisher SITABANI DEVI COMMUNITY COLLEGE
Library EDUCATIONAL PEDAGOGY
2021
ENGLISH



504. GROUP B - SCREEN CARD

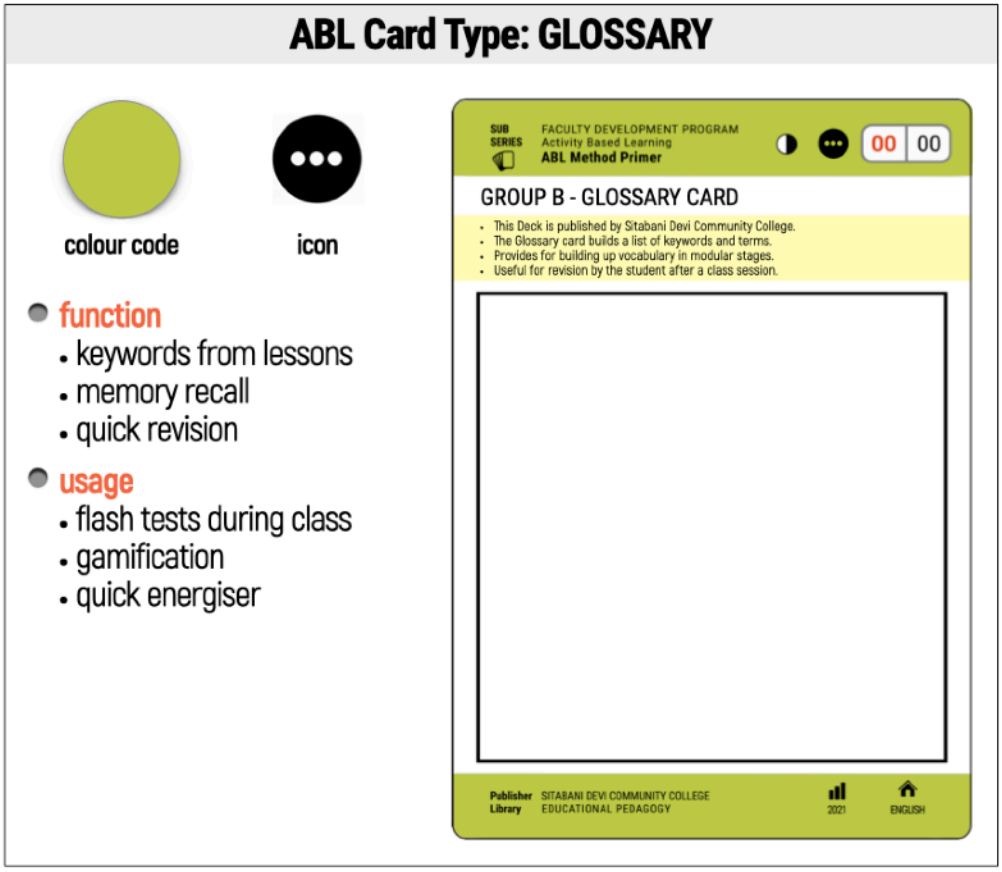
504.1.The Screen card is an audio-visual activity for students.

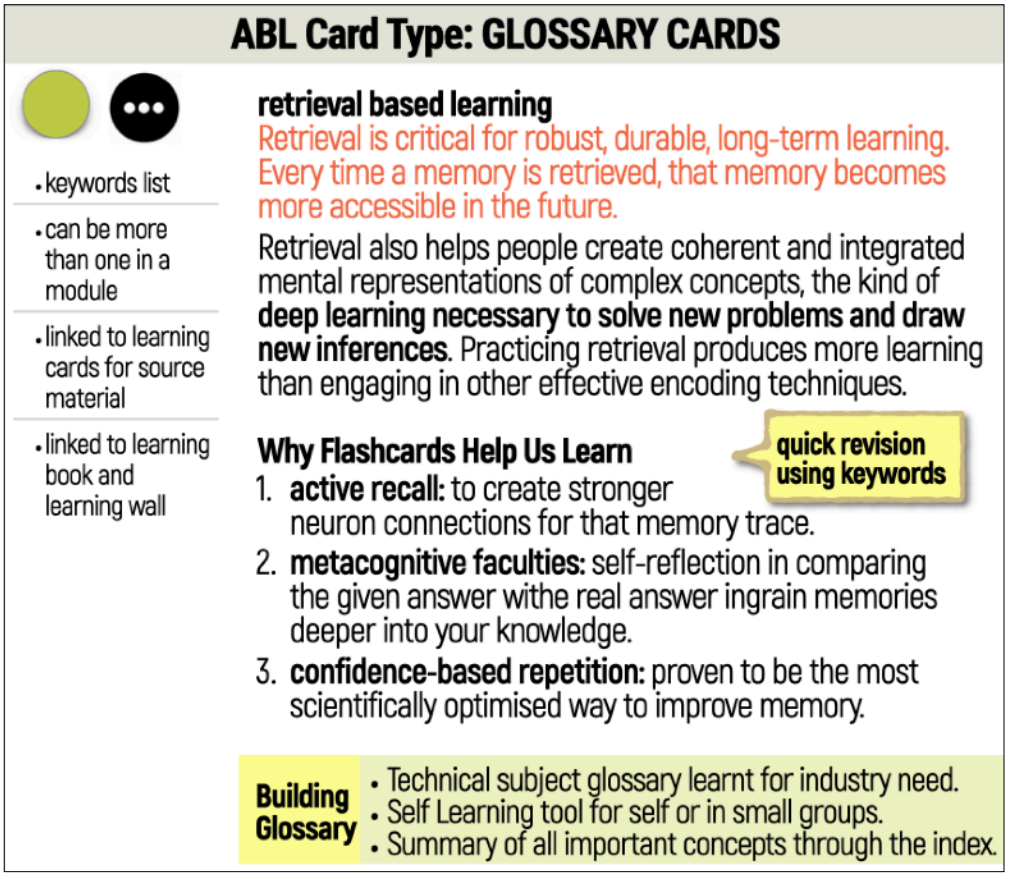

ABL Card Type: SCREEN
colour code
icon
function
audio Visual presentation
sight and Sound delivery
youtube / Vimeo playout
courseware multimedia
usage
information
general knowledge
relief from classroom lecture
linked to learning cards
SUB SERIES
FACULTY DEVELOPMENT PROGRAM
Activity Based Learning
ABL Method Primer
00 00
GROUP B - SCREEN CARD
This Deck is published by Sitabani Devi Community College.
The Screen card is an audio-visual activity provided by the teacher.
Digital platforms are welcomed for student learning in the modern classroom.
This is a self paced activity in the time and place determined by the student.
Publisher SITABANI DEVI COMMUNITY COLLEGE
Library EDUCATIONAL PEDAGOGY
2021
ENGLISH


ABL Card Type: SCREEN
screen includes all interactions with AV aids.
pursued at own time, place and interest of student
remedial activities can be programmed for reducing the bell curve outliers
3 major uses:
information
structured skill and knowledge acquisition
bring world into the classroom
audio-visual aids in classrooms
Multi-media AV activities have transformed into New Media.
Online TV: YouTube
Slideshows
Curated films in class
Radio shows
Podcasts
Poster Exhibits
Murals and Collages
Attract and retain learners' attention
Generate interest across different levels of students
Make class more interactive and interesting
AV is more effective for helping learners with low prior knowledge or aptitude in the domain being learned.
YouTube
One of today's most powerful educational tools is free, constantly expanding, in step with current trends, and at your fingertips wherever you are in the world. It doesn't require extensive training, and it can personalise and improve learning in a variety of impactful, creative, innovative, and relevant ways. YouTube is more than entertainment. YouTube is a dynamic tool for learning that meets students where they are.

505. GROUP B - GLOSSARY CARD

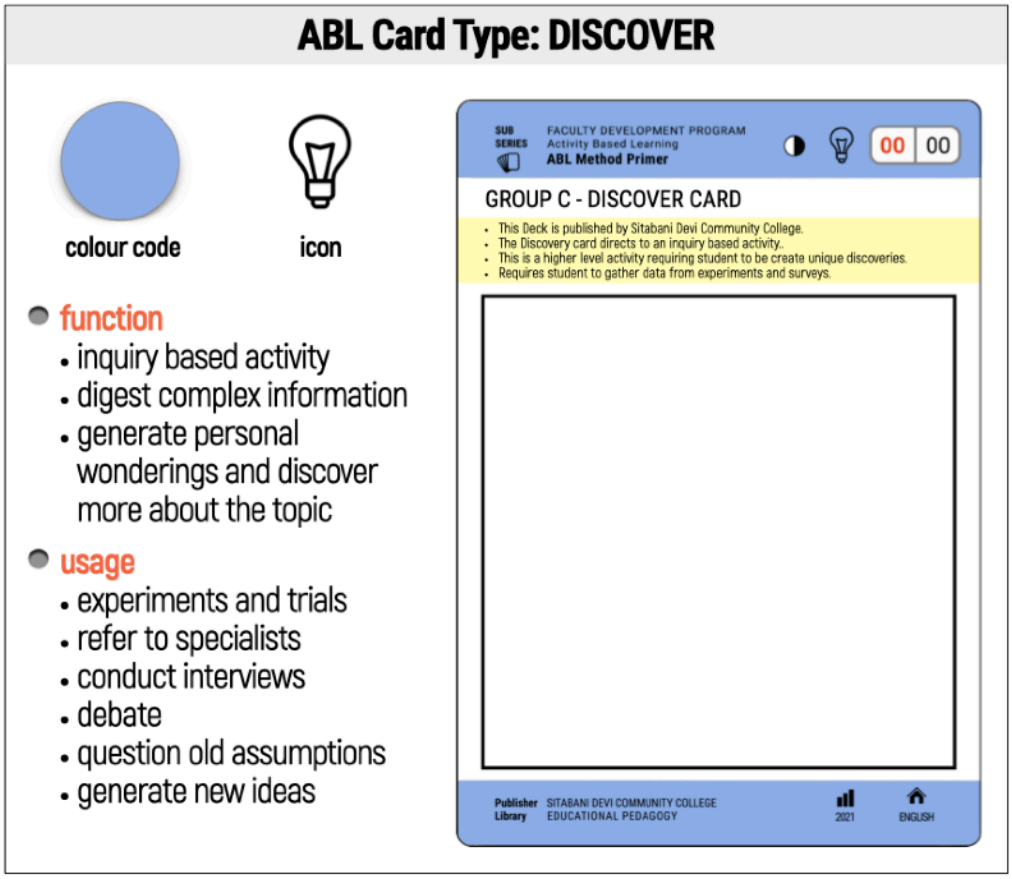
505.1. The Glossary card builds the required vocabulary for the course.

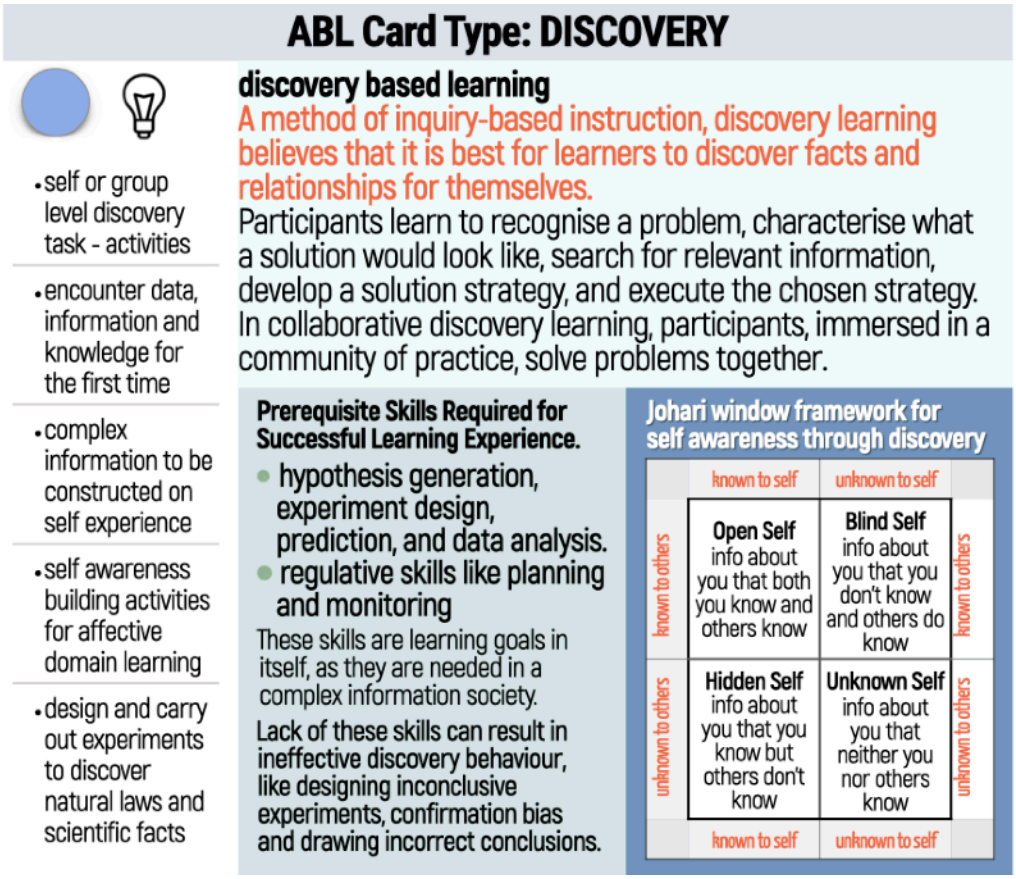



ABL Card Type: GLOSSARY CARDS
keywords list
can be more than one in a module
linked to learning cards for source material
linked to learning book and learning wall
retrieval based learning
Retrieval is critical for robust, durable, long-term learning. Every time a memory is retrieved, that memory becomes more accessible in the future.
Retrieval also helps people create coherent and integrated mental representations of complex concepts, the kind of deep learning necessary to solve new problems and draw new inferences. Practicing retrieval produces more learning than engaging in other effective encoding techniques.
Why Flashcards Help Us Learn
quick revision using keywords
1. active recall: to create stronger neuron connections for that memory trace.
2. metacognitive faculties: self-reflection in comparing the given answer withe real answer ingrain memories deeper into your knowledge.
3. confidence-based repetition: proven to be the most scientifically optimised way to improve memory.
Building Glossary
Technical subject glossary learnt for industry need.
Self Learning tool for self or in small groups.
Summary of all important concepts through the index.

506. GROUP C - DISCOVER CARD

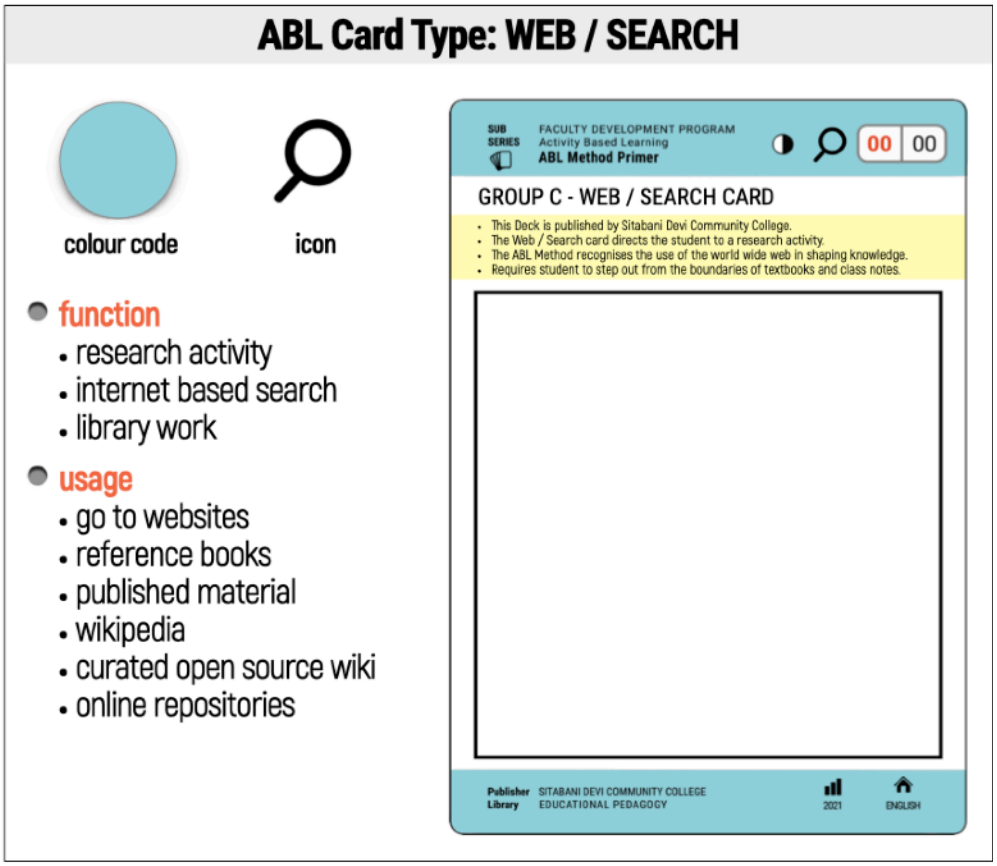
506.1.The Discover card is directed towards inquiry based learning.

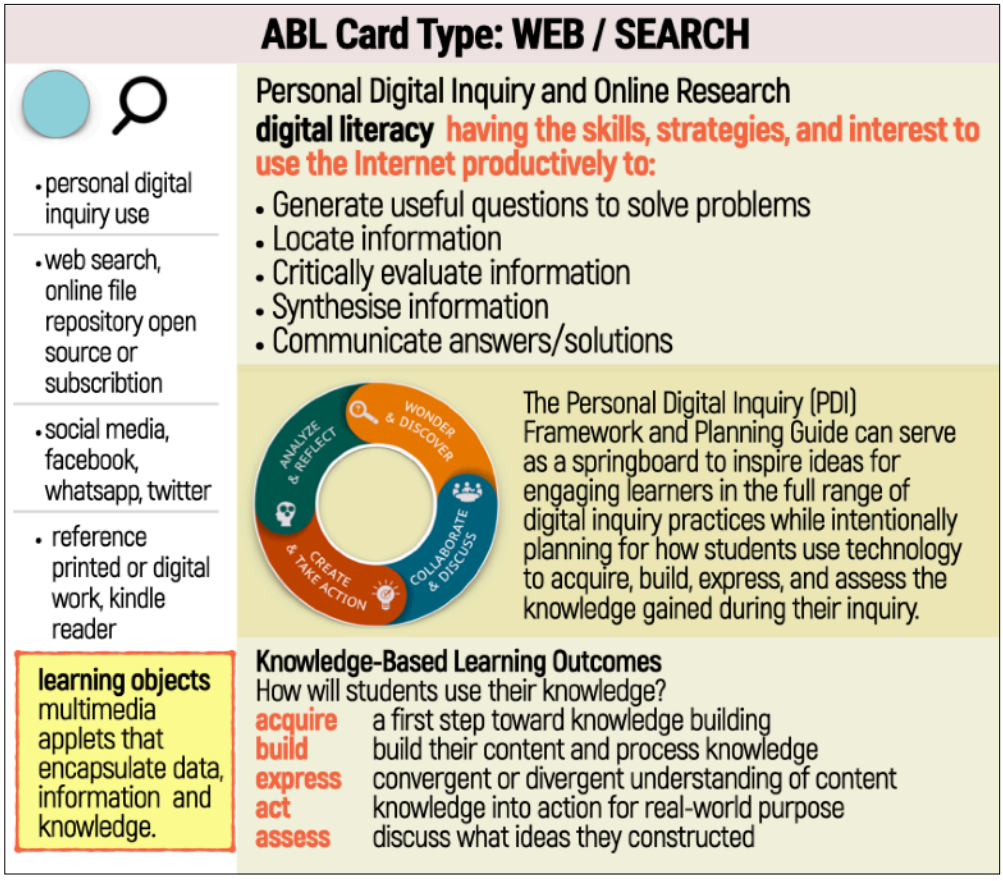



ABL Card Type: DISCOVERY
• self or group level discovery task - activities
• encounter data, information and knowledge for the first time
• complex information to be constructed on self experience
• self awareness building activities for affective domain learning
• design and carry out experiments to discover natural laws and scientific facts
discovery based learning
A method of inquiry-based instruction, discovery learning believes that it is best for learners to discover facts and relationships for themselves.
Participants learn to recognise a problem, characterise what a solution would look like, search for relevant information, develop a solution strategy, and execute the chosen strategy. In collaborative discovery learning, participants, immersed in a community of practice, solve problems together.
Prerequisite Skills Required for Successful Learning Experience.
• hypothesis generation, experiment design, prediction, and data analysis.
• regulative skills like planning and monitoring
These skills are learning goals in itself, as they are needed in a complex information society.
Lack of these skills can result in ineffective discovery behaviour, like designing inconclusive experiments, confirmation bias and drawing incorrect conclusions.
Johari window framework for self awareness through discovery
known to self
unknown to self
known to others
unknown to others
Open Self
info about you that both you know and others know
Blind Self
info about you that you don't know and others do know
Hidden Self
info about you that you know but others don't know
Unknown Self
info about you that neither you nor others know

507. GROUP C - WEB / SEARCH CARD

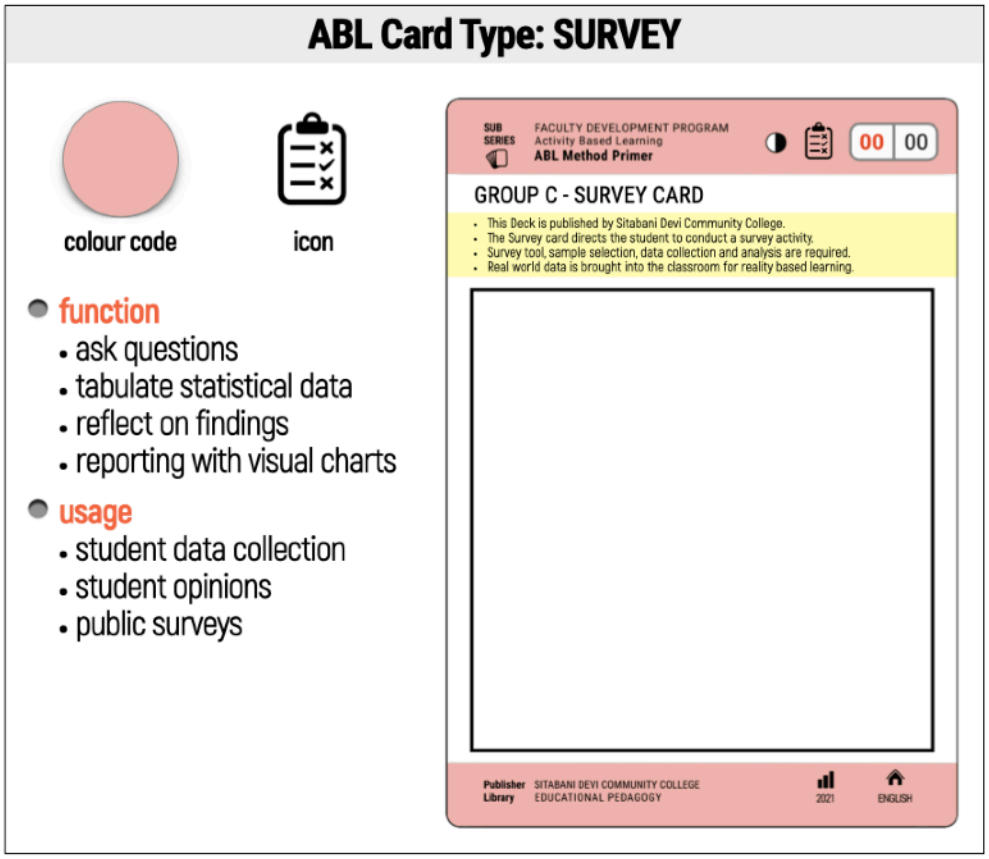
507.1. The Web / Search card directs the student to undertake a digital inquiry or a traditional research in the library and other media.

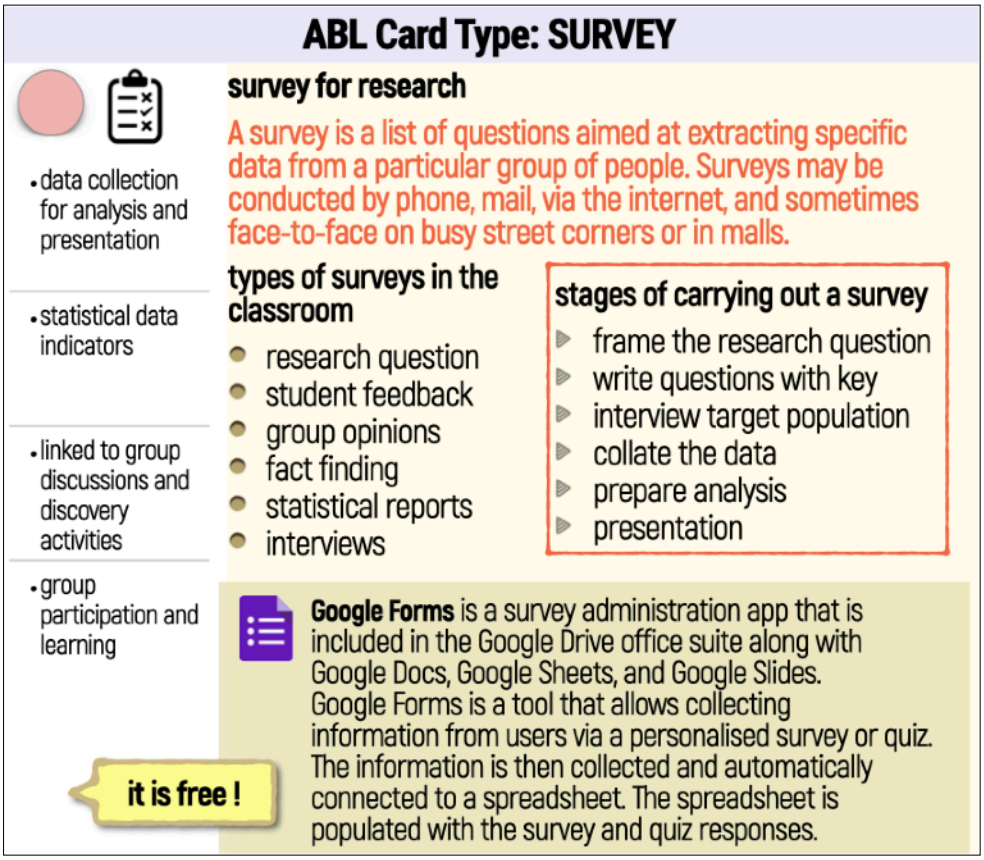

ABL Card Type: WEB / SEARCH
colour code
icon
function
• research activity
• internet based search
• library work
usage
• go to websites
• reference books
• published material
• wikipedia
• curated open source wiki
• online repositories
SUB SERIES
FACULTY DEVELOPMENT PROGRAM
Activity Based Learning
ABL Method Primer
00 00
GROUP C - WEB / SEARCH CARD
This Deck is published by Sitabani Devi Community College.
The Web / Search card directs the student to a research activity.
The ABL Method recognises the use of the world wide web in shaping knowledge.
Requires student to step out from the boundaries of textbooks and class notes.
Publisher SITABANI DEVI COMMUNITY COLLEGE
Library EDUCATIONAL PEDAGOGY
2021
ENGLISH


ABL Card Type: WEB / SEARCH
• personal digital inquiry use
• web search, online file repository open source or subscribtion
• social media, facebook, whatsapp, twitter
• reference printed or digital work, kindle reader
learning objects
multimedia applets that encapsulate data, information and knowledge.
Personal Digital Inquiry and Online Research
digital literacy having the skills, strategies, and interest to use the Internet productively to:
• Generate useful questions to solve problems
• Locate information
• Critically evaluate information
• Synthesise information
• Communicate answers/solutions
WONDER & DISCOVER
COLLABORATE & DISCUSS
CREATE & TAKE ACTION
ANALYZE & REFLECT
The Personal Digital Inquiry (PDI) Framework and Planning Guide can serve as a springboard to inspire ideas for engaging learners in the full range of digital inquiry practices while intentionally planning for how students use technology to acquire, build, express, and assess the knowledge gained during their inquiry.
Knowledge-Based Learning Outcomes
How will students use their knowledge?
acquire a first step toward knowledge building
build build their content and process knowledge
express convergent or divergent understanding of content
act knowledge into action for real-world purpose
assess discuss what ideas they constructed

508. GROUP C - SURVEY CARD

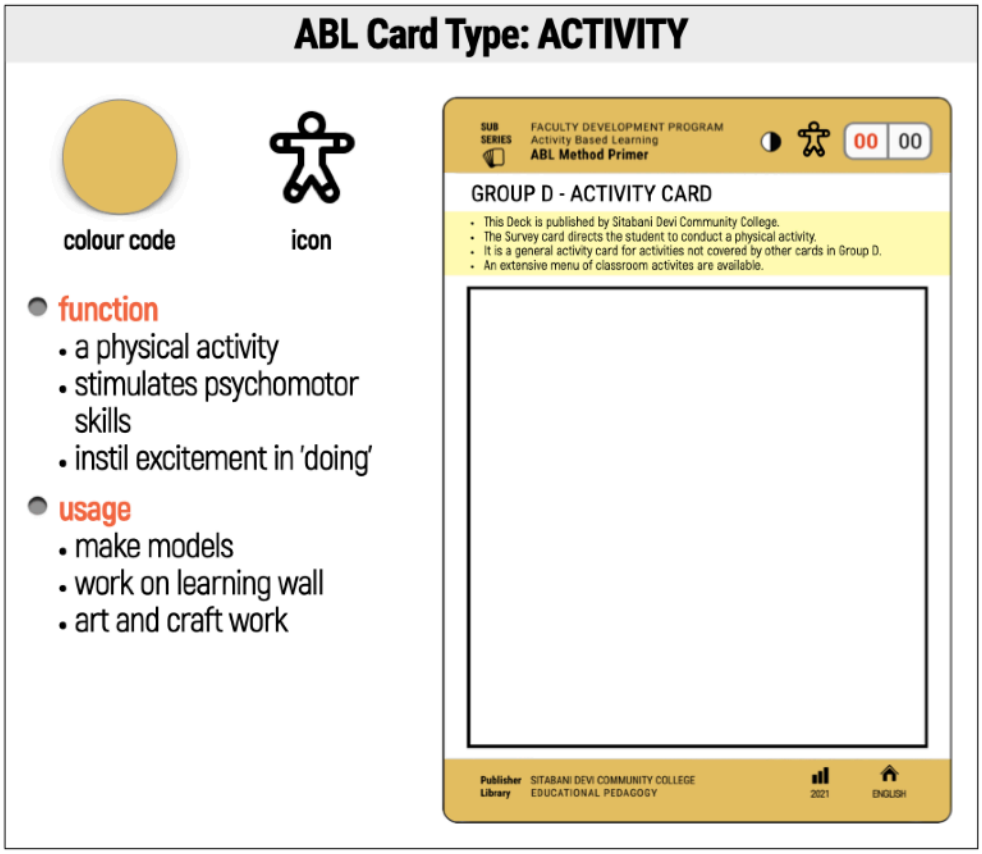
The Survey card directs the students(s) to carry out a survey and analyse the data.

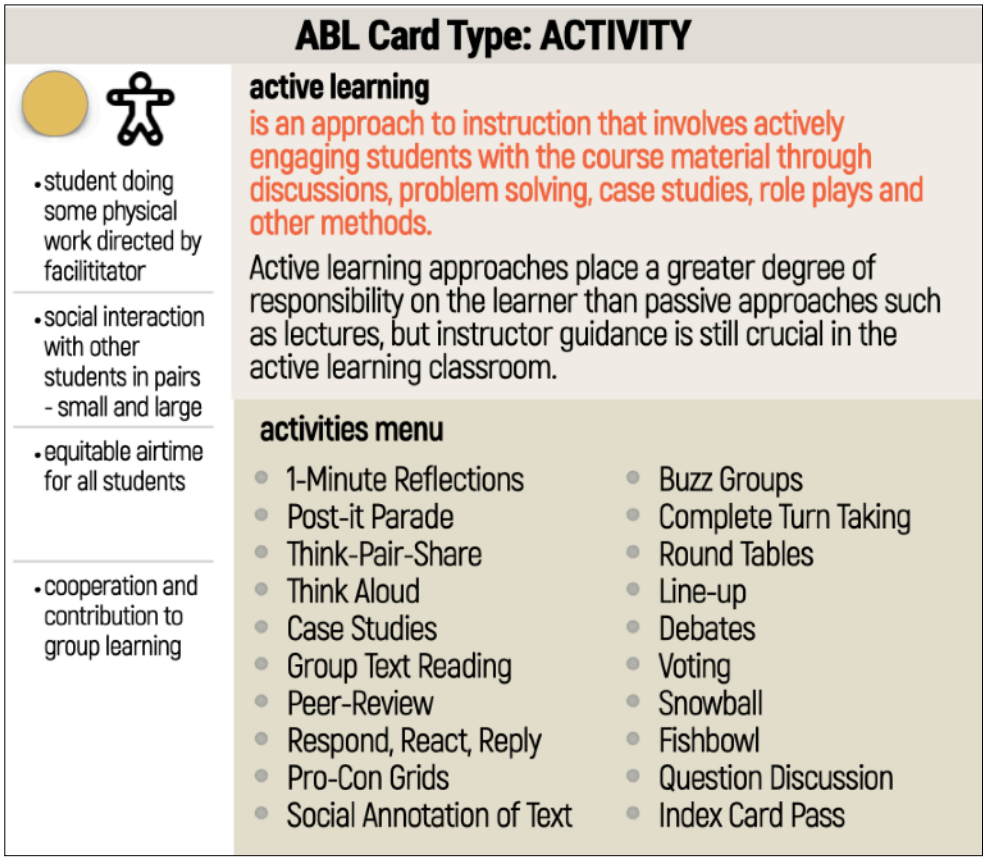



ABL Card Type: SURVEY
data collection for analysis and presentation
statistical data indicators
linked to group discussions and discovery activities
group participation and learning
survey for research
A survey is a list of questions aimed at extracting specific data from a particular group of people. Surveys may be conducted by phone, mail, via the internet, and sometimes face-to-face on busy street corners or in malls.
types of surveys in the classroom
research question
student feedback
group opinions
fact finding
statistical reports
interviews
stages of carrying out a survey
frame the research question
write questions with key
interview target population
collate the data
prepare analysis
presentation
it is free !
Google Forms is a survey administration app that is included in the Google Drive office suite along with Google Docs, Google Sheets, and Google Slides. Google Forms is a tool that allows collecting information from users via a personalised survey or quiz. The information is then collected and automatically connected to a spreadsheet. The spreadsheet is populated with the survey and quiz responses.

509. GROUP D - ACTIVITY CARD

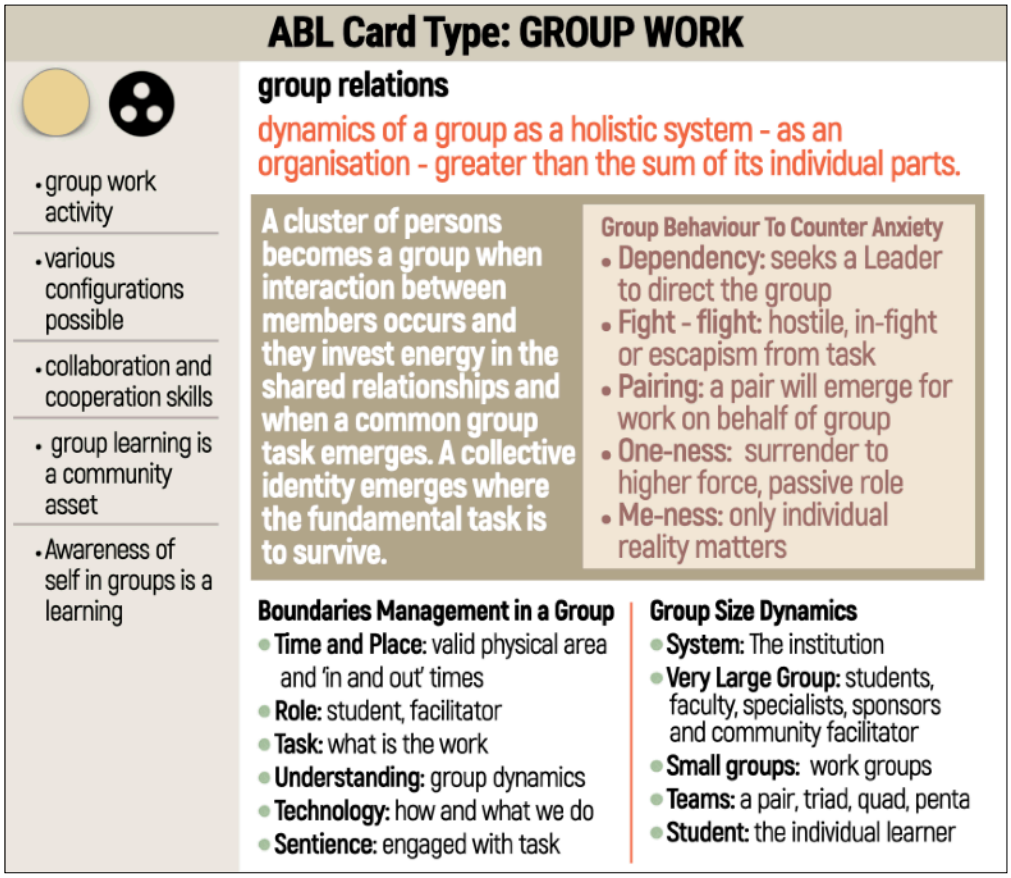
509.1. The Activity card directs the students(s) to do a physical activity either in the classroom or outdoors.

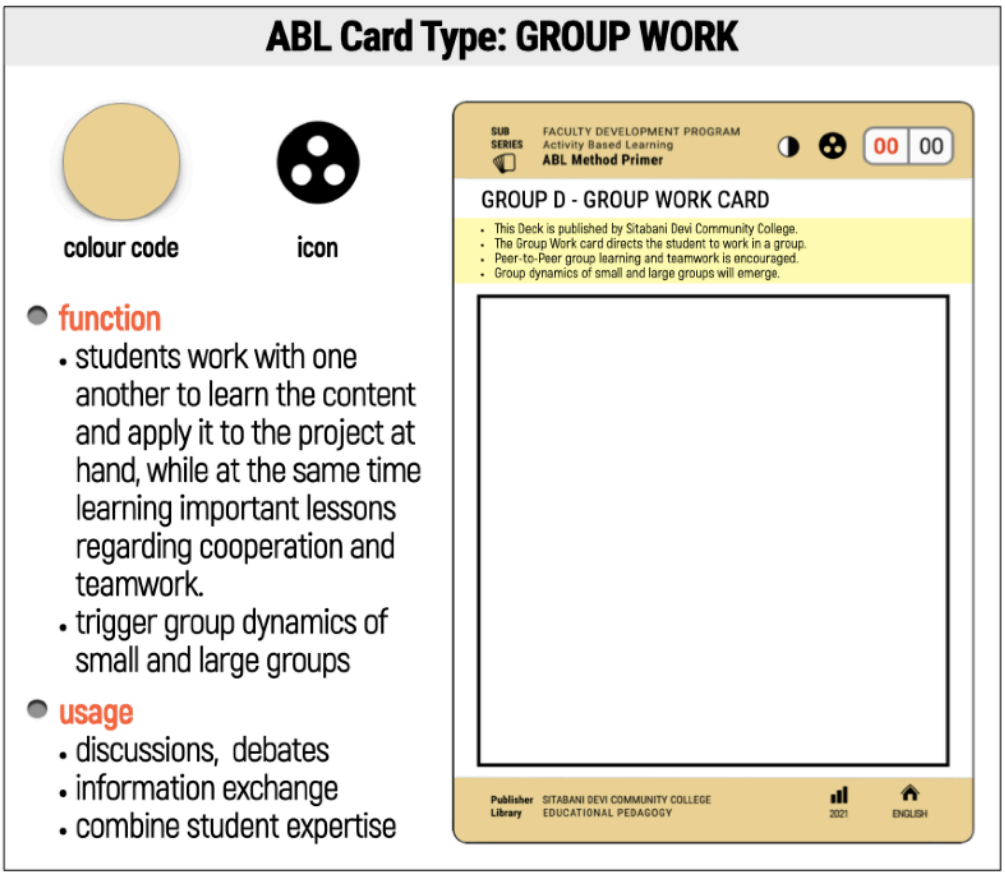



ABL Card Type: ACTIVITY
student doing some physical work directed by facilititator
social interaction with other students in pairs - small and large
equitable airtime for all students
cooperation and contribution to group learning
active learning
is an approach to instruction that involves actively engaging students with the course material through discussions, problem solving, case studies, role plays and other methods.
Active learning approaches place a greater degree of responsibility on the learner than passive approaches such as lectures, but instructor guidance is still crucial in the active learning classroom.
activities menu
1-Minute Reflections
Post-it Parade
Think-Pair-Share
Think Aloud
Case Studies
Group Text Reading
Peer-Review
Respond, React, Reply
Pro-Con Grids
Social Annotation of Text
Buzz Groups
Complete Turn Taking
Round Tables
Line-up
Debates
Voting
Snowball
Fishbowl
Question Discussion
Index Card Pass

510. GROUP D - GROUP WORK CARD

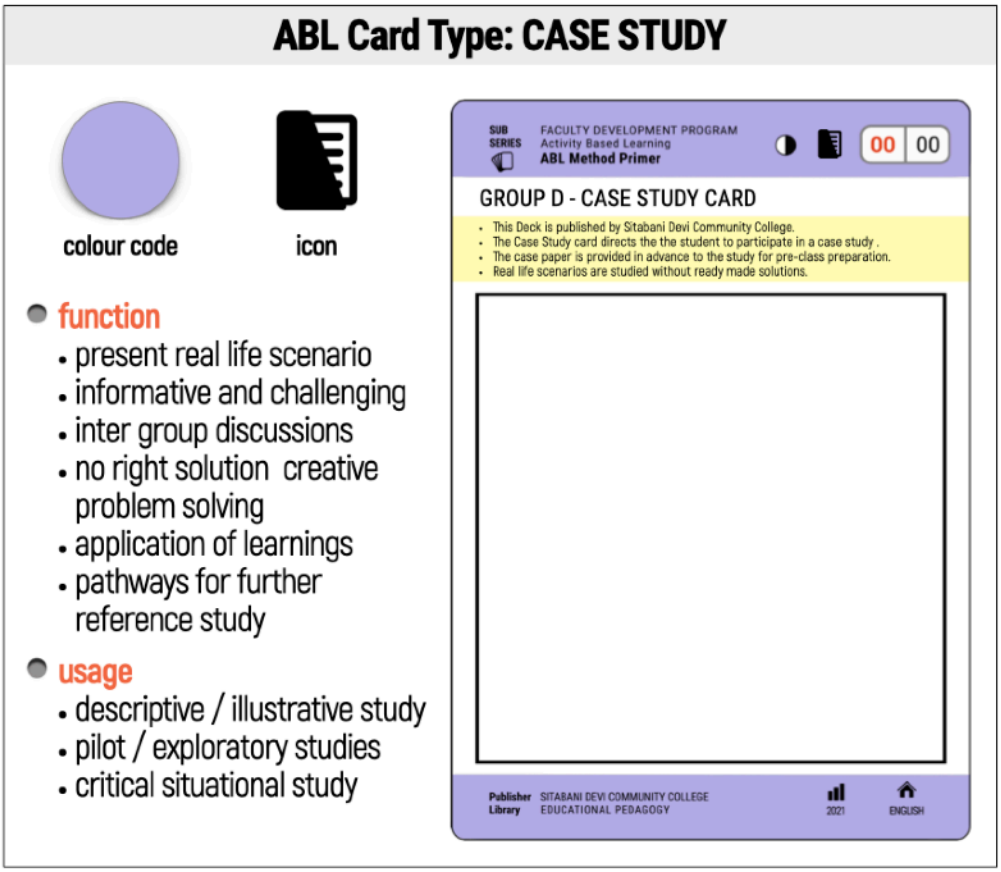
510.1. The Group Work card directs the students to take up an activity in a group, either in the class room or outdoors.

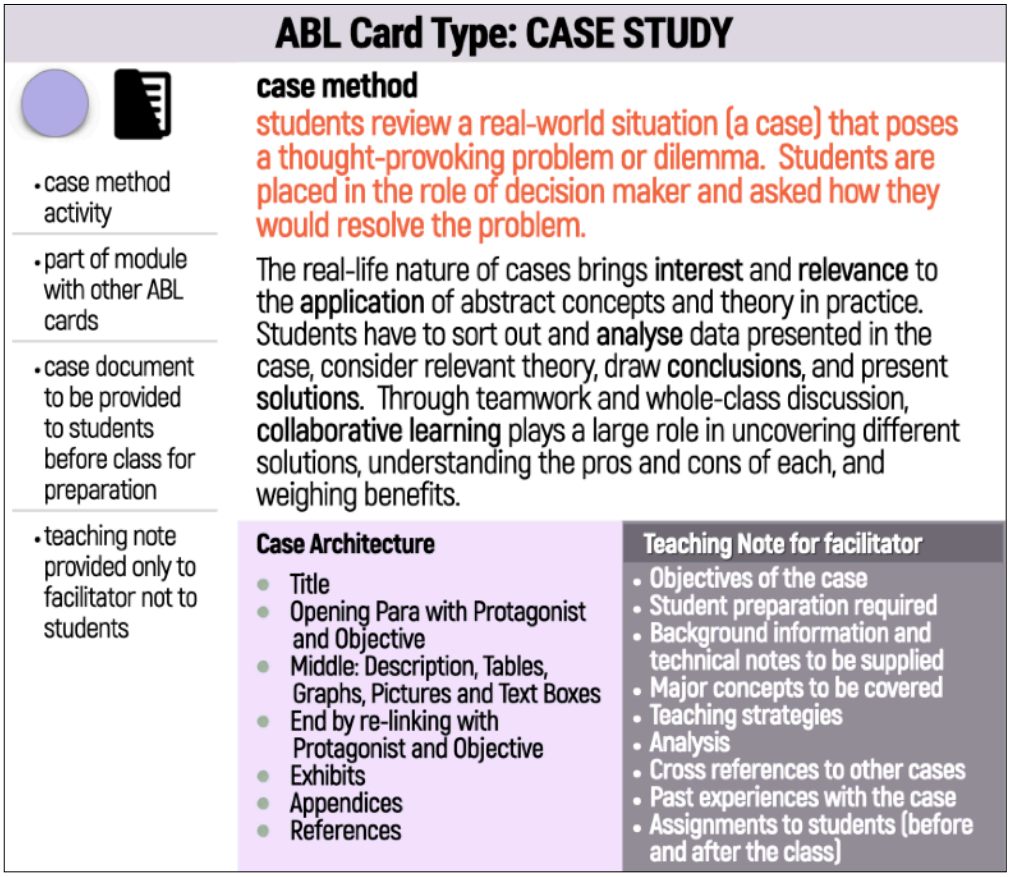

ABL Card Type: GROUP WORK
group work activity
various configurations possible
collaboration and cooperation skills
group learning is a community asset
Awareness of self in groups is a learning
group relations
dynamics of a group as a holistic system - as an organisation - greater than the sum of its individual parts.
A cluster of persons becomes a group when interaction between members occurs and they invest energy in the shared relationships and when a common group task emerges. A collective identity emerges where the fundamental task is to survive.
Group Behaviour To Counter Anxiety
Dependency: seeks a Leader to direct the group
Fight - flight: hostile, in-fight or escapism from task
Pairing: a pair will emerge for work on behalf of group
One-ness: surrender to higher force, passive role
Me-ness: only individual reality matters
Boundaries Management in a Group
Time and Place: valid physical area and 'in and out' times
Role: student, facilitator
Task: what is the work
Understanding: group dynamics
Technology: how and what we do
Sentience: engaged with task
Group Size Dynamics
System: The institution
Very Large Group: students, faculty, specialists, sponsors and community facilitator
Small groups: work groups
Teams: a pair, triad, quad, penta
Student: the individual learner


ABL Card Type: GROUP WORK
colour code
icon
function
students work with one another to learn the content and apply it to the project at hand, while at the same time learning important lessons regarding cooperation and teamwork.
trigger group dynamics of small and large groups
usage
discussions, debates
information exchange
combine student expertise
SUB SERIES
FACULTY DEVELOPMENT PROGRAM
Activity Based Learning
ABL Method Primer
00 00
GROUP D - GROUP WORK CARD
This Deck is published by Sitabani Devi Community College.
The Group Work card directs the student to work in a group.
Peer-to-Peer group learning and teamwork is encouraged.
Group dynamics of small and large groups will emerge.
Publisher
SITABANI DEVI COMMUNITY COLLEGE
Library
EDUCATIONAL PEDAGOGY
2021
ENGLISH

511. GROUP D - CASE STUDY CARD

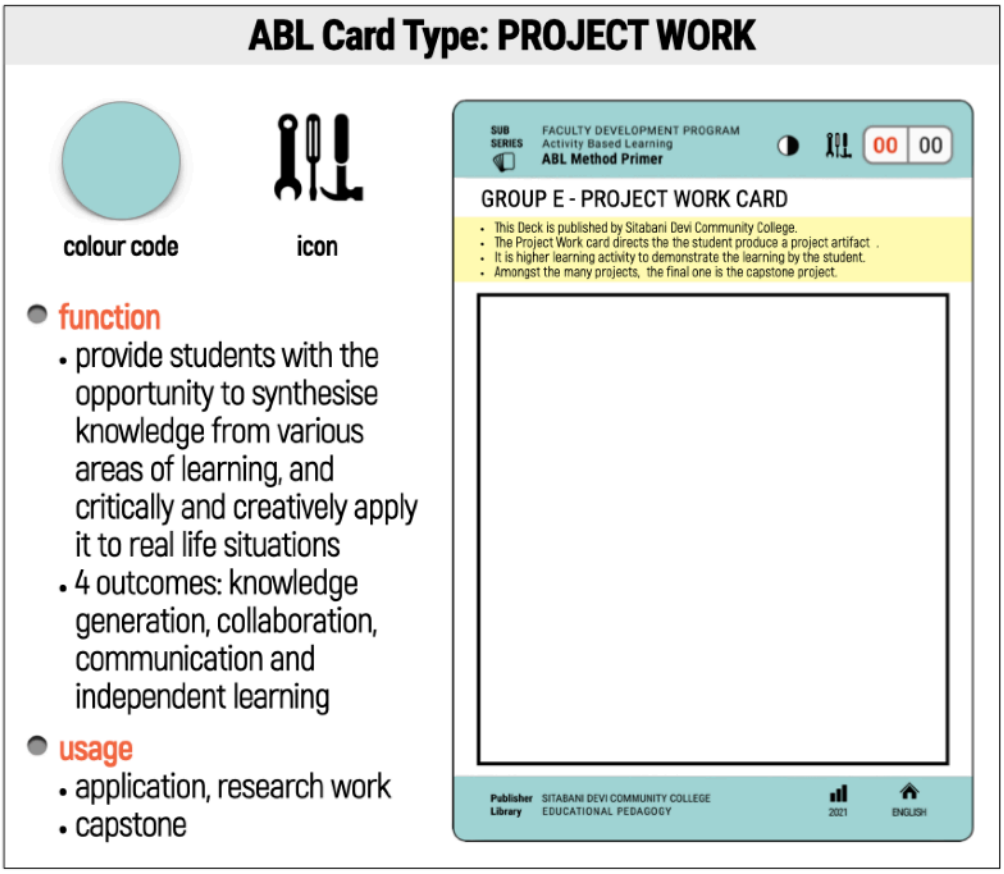
511.1. The Case Study card presents a Case study as a learning from a real life scenario. Model adapted from IIM-Ahmedabad Case Writer method.

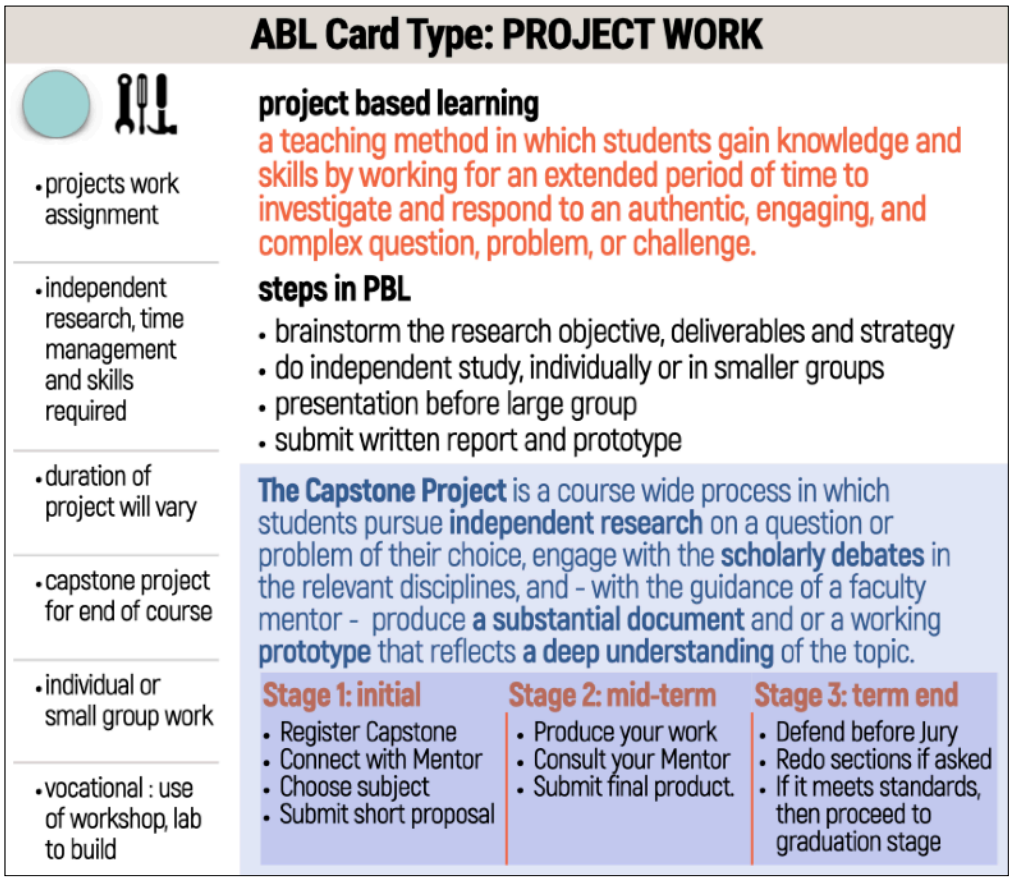

ABL Card Type: CASE STUDY
colour code
icon
function
present real life scenario
informative and challenging
inter group discussions
no right solution creative problem solving
application of learnings
pathways for further reference study
usage
descriptive / illustrative study
pilot / exploratory studies
critical situational study
SUB SERIES
FACULTY DEVELOPMENT PROGRAM
Activity Based Learning
ABL Method Primer
00 00
GROUP D - CASE STUDY CARD
This Deck is published by Sitabani Devi Community College.
The Case Study card directs the the student to participate in a case study .
The case paper is provided in advance to the study for pre-class preparation.
Real life scenarios are studied without ready made solutions.
Publisher
SITABANI DEVI COMMUNITY COLLEGE
Library
EDUCATIONAL PEDAGOGY
2021
ENGLISH


ABL Card Type: CASE STUDY
case method activity
part of module with other ABL cards
case document to be provided to students before class for preparation
teaching note provided only to facilitator not to students
case method
students review a real-world situation (a case) that poses a thought-provoking problem or dilemma. Students are placed in the role of decision maker and asked how they would resolve the problem.
The real-life nature of cases brings interest and relevance to the application of abstract concepts and theory in practice. Students have to sort out and analyse data presented in the case, consider relevant theory, draw conclusions, and present solutions. Through teamwork and whole-class discussion, collaborative learning plays a large role in uncovering different solutions, understanding the pros and cons of each, and weighing benefits.
Case Architecture
Title
Opening Para with Protagonist and Objective
Middle: Description, Tables, Graphs, Pictures and Text Boxes
End by re-linking with Protagonist and Objective
Exhibits
Appendices
References
Teaching Note for facilitator
Objectives of the case
Student preparation required
Background information and technical notes to be supplied
Major concepts to be covered
Teaching strategies
Analysis
Cross references to other cases
Past experiences with the case
Assignments to students (before and after the class)

512. GROUP E - PROJECT WORK CARD

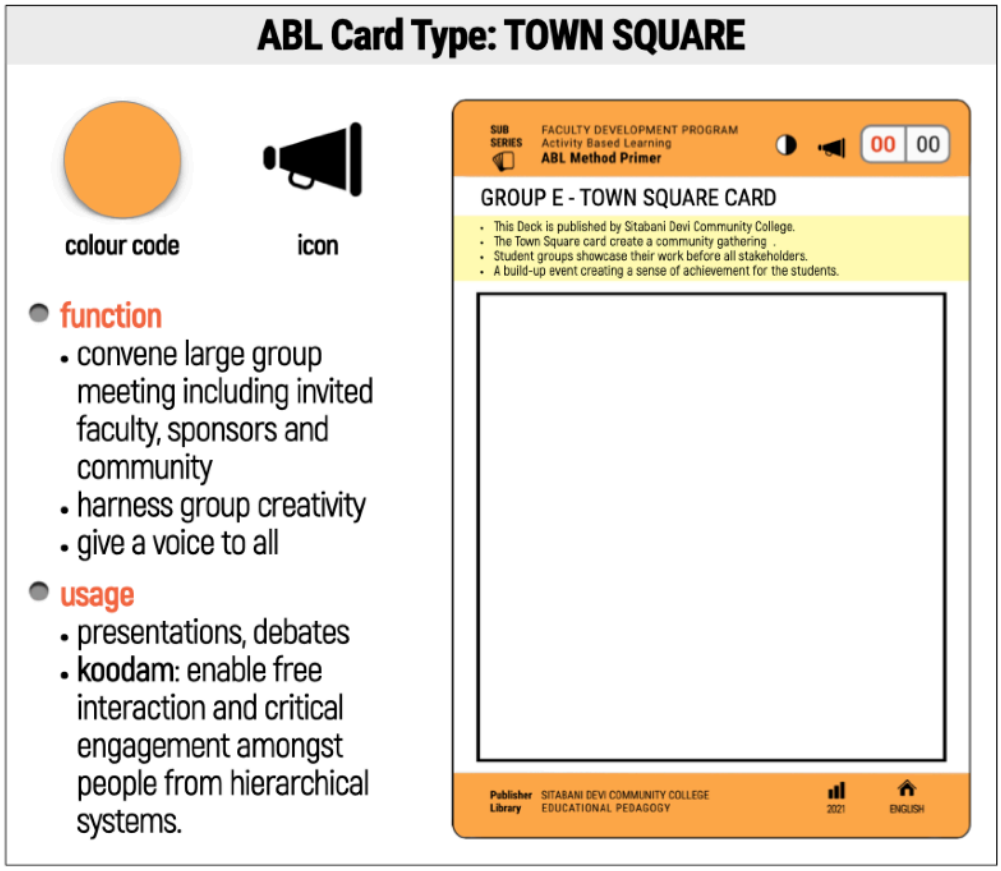
512.1. The Project Work card directs the students to prepare a project that integrates the learnings from the course.

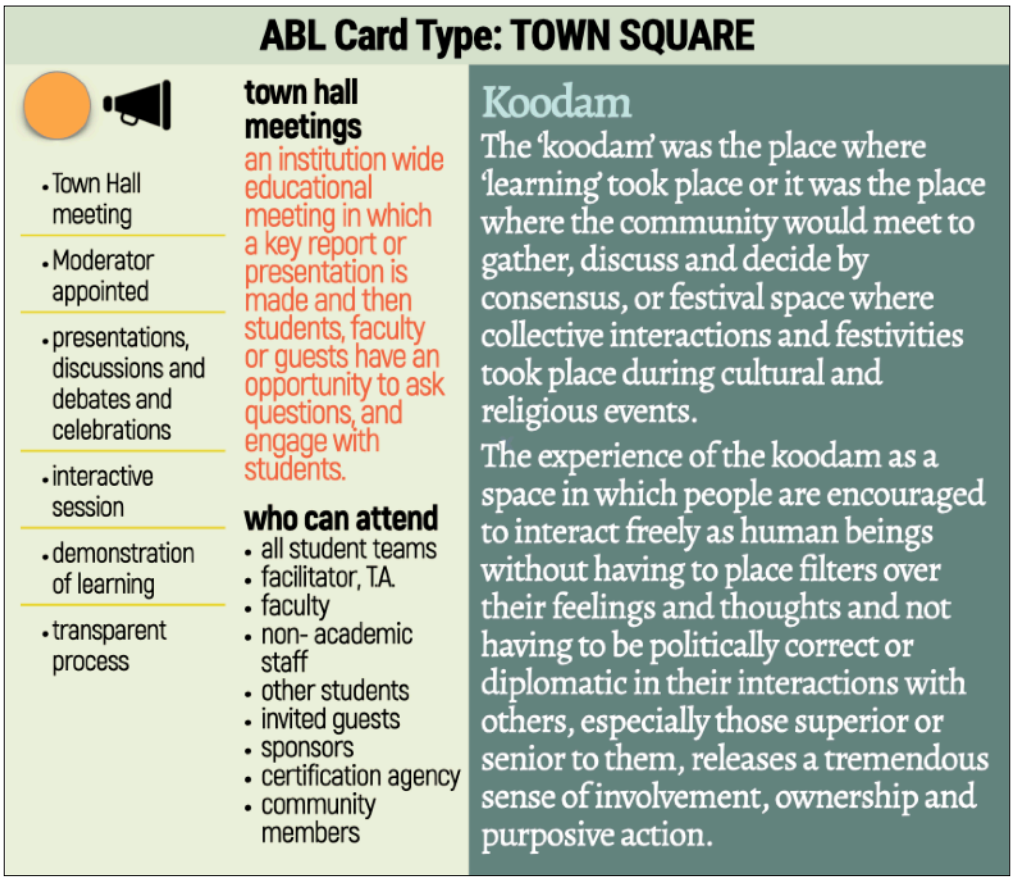

ABL Card Type: PROJECT WORK
colour code
icon
function
provide students with the opportunity to synthesise knowledge from various areas of learning, and critically and creatively apply it to real life situations
4 outcomes: knowledge generation, collaboration, communication and independent learning
usage
application, research work
capstone
SUB SERIES
FACULTY DEVELOPMENT PROGRAM
Activity Based Learning
ABL Method Primer
00 00
GROUP E - PROJECT WORK CARD
This Deck is published by Sitabani Devi Community College.
The Project Work card directs the the student produce a project artifact .
It is higher learning activity to demonstrate the learning by the student.
Amongst the many projects, the final one is the capstone project.
Publisher SITABANI DEVI COMMUNITY COLLEGE
Library EDUCATIONAL PEDAGOGY
2021
ENGLISH


ABL Card Type: PROJECT WORK
projects work assignment
independent research, time management and skills required
duration of project will vary
capstone project for end of course
individual or small group work
vocational : use of workshop, lab to build
project based learning
a teaching method in which students gain knowledge and skills by working for an extended period of time to investigate and respond to an authentic, engaging, and complex question, problem, or challenge.
steps in PBL
brainstorm the research objective, deliverables and strategy
do independent study, individually or in smaller groups
presentation before large group
submit written report and prototype
The Capstone Project is a course wide process in which students pursue independent research on a question or problem of their choice, engage with the scholarly debates in the relevant disciplines, and - with the guidance of a faculty mentor - produce a substantial document and or a working prototype that reflects a deep understanding of the topic.
Stage 1: initial
Register Capstone
Connect with Mentor
Choose subject
Submit short proposal
Stage 2: mid-term
Produce your work
Consult your Mentor
Submit final product.
Stage 3: term end
Defend before Jury
Redo sections if asked
If it meets standards, then proceed to graduation stage

513. GROUP E - TOWNSQUARE CARD

513.1. The Town Square card directs a very large group to come together for a community event attended by all stakeholders.

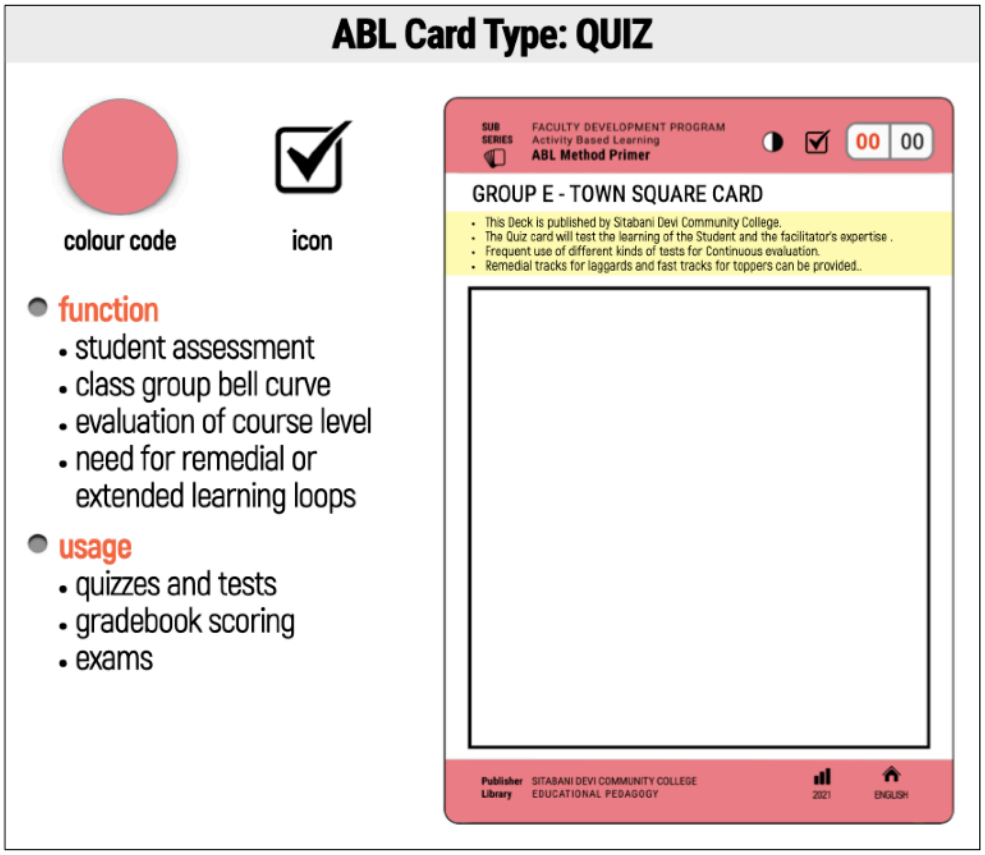

ABL Card Type: TOWN SQUARE
colour code
icon
function
convene large group meeting including invited faculty, sponsors and community
harness group creativity
give a voice to all
usage
presentations, debates
koodam: enable free interaction and critical engagement amongst people from hierarchical systems.
SUB SERIES
FACULTY DEVELOPMENT PROGRAM
Activity Based Learning
ABL Method Primer
00 00
GROUP E - TOWN SQUARE CARD
This Deck is published by Sitabani Devi Community College.
The Town Square card create a community gathering .
Student groups showcase their work before all stakeholders.
A build-up event creating a sense of achievement for the students.
Publisher
SITABANI DEVI COMMUNITY COLLEGE
Library
EDUCATIONAL PEDAGOGY
2021
ENGLISH

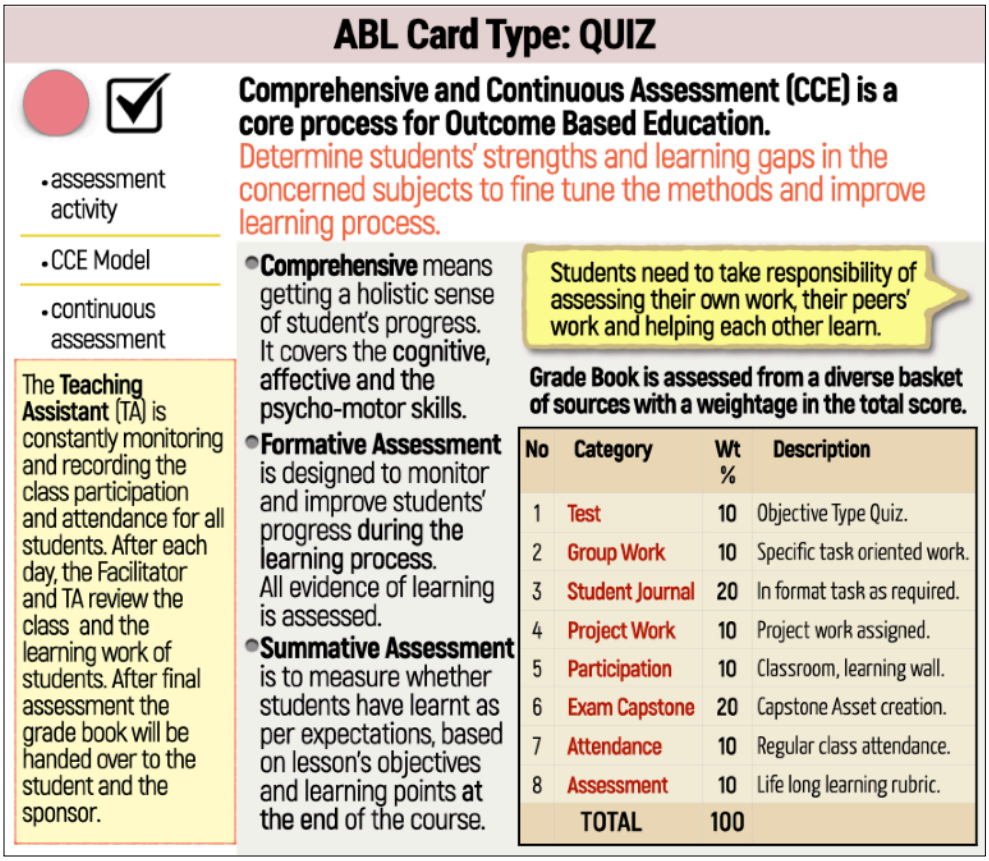

ABL Card Type: TOWN SQUARE
Town Hall meeting
Moderator appointed
presentations, discussions and debates and celebrations
interactive session
demonstration of learning
transparent process
town hall meetings
an institution wide educational meeting in which a key report or presentation is made and then students, faculty or guests have an opportunity to ask questions, and engage with students.
who can attend
all student teams
facilitator, T.A.
faculty
non- academic staff
other students
invited guests
sponsors
certification agency
community members
Koodam
The 'koodam' was the place where 'learning' took place or it was the place where the community would meet to gather, discuss and decide by consensus, or festival space where collective interactions and festivities took place during cultural and religious events.
The experience of the koodam as a space in which people are encouraged to interact freely as human beings without having to place filters over their feelings and thoughts and not having to be politically correct or diplomatic in their interactions with others, especially those superior or senior to them, releases a tremendous sense of involvement, ownership and purposive action.

The adaption of the 'Koodam' is credited to V. Suresh (www.kooodam.org) and Prof. Pradip Prabhu (TISS)

514. GROUP E - QUIZ CARD

514.1. The Quiz card is as per the Continuous and Comprehensive Evaluation (CCE) framework for assessments.


ABL Card Type: QUIZ
colour code
icon
function
• student assessment
• class group bell curve
• evaluation of course level
• need for remedial or extended learning loops
usage
• quizzes and tests
• gradebook scoring
• exams
SUB SERIES
FACULTY DEVELOPMENT PROGRAM
Activity Based Learning
ABL Method Primer
00 00
GROUP E - TOWN SQUARE CARD
• This Deck is published by Sitabani Devi Community College.
• The Quiz card will test the learning of the Student and the facilitator's expertise .
• Frequent use of different kinds of tests for Continuous evaluation.
• Remedial tracks for laggards and fast tracks for toppers can be provided..
Publisher SITABANI DEVI COMMUNITY COLLEGE
Library EDUCATIONAL PEDAGOGY
2021
ENGLISH


ABL Card Type: QUIZ
•assessment activity
•CCE Model
•continuous assessment
The Teaching Assistant (TA) is constantly monitoring and recording the class participation and attendance for all students. After each day, the Facilitator and TA review the class and the learning work of students. After final assessment the grade book will be handed over to the student and the sponsor.
Comprehensive and Continuous Assessment (CCE) is a core process for Outcome Based Education.
Determine students' strengths and learning gaps in the concerned subjects to fine tune the methods and improve learning process.
•Comprehensive means getting a holistic sense of student's progress. It covers the cognitive, affective and the psycho-motor skills.
•Formative Assessment is designed to monitor and improve students' progress during the learning process. All evidence of learning is assessed.
•Summative Assessment is to measure whether students have learnt as per expectations, based on lesson's objectives and learning points at the end of the course.
Students need to take responsibility of assessing their own work, their peers' work and helping each other learn.
Grade Book is assessed from a diverse basket of sources with a weightage in the total score.
No | Category | Wt % | Description
1 | Test | 10 | Objective Type Quiz.
2 | Group Work | 10 | Specific task oriented work.
3 | Student Journal | 20 | In format task as required.
4 | Project Work | 10 | Project work assigned.
5 | Participation | 10 | Classroom, learning wall.
6 | Exam Capstone | 20 | Capstone Asset creation.
7 | Attendance | 10 | Regular class attendance.
8 | Assessment | 10 | Life long learning rubric.
TOTAL | 100

600 | TOOLS
TOOLS FOR ACTIVITY BASED LEARNING

601. THE 3-AXIS ABL METHOD

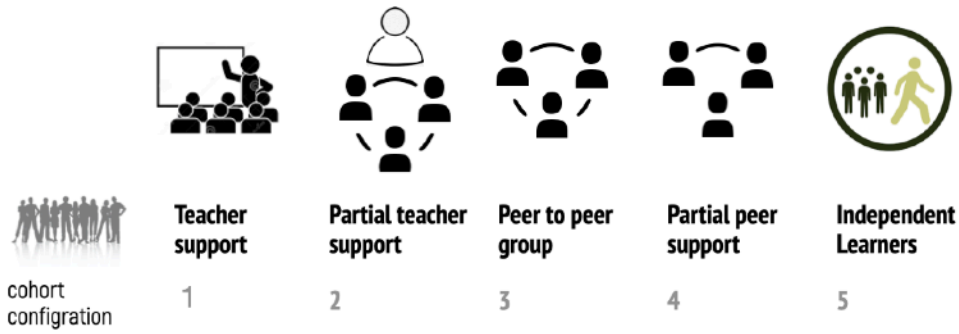
601.1. The ABL Method is more than just ABL Cards. It is supported by the Learning Wall and the Student Learning Notebook.

THE 3-AXIS ABL METHOD	ABL Cards	Active Classroom	Student Learning Notebook

602. THE ACTIVE CLASSROOM

602.1. The Active Classroom is designed for student participation and learning. The 2 aspects of the active classroom are:
1. Sitting Configuration as per cohort
2. Learning Wall

602.3. Cohort for Classroom spatial design: The sitting arrangements in learning cohorts as per the configurations:



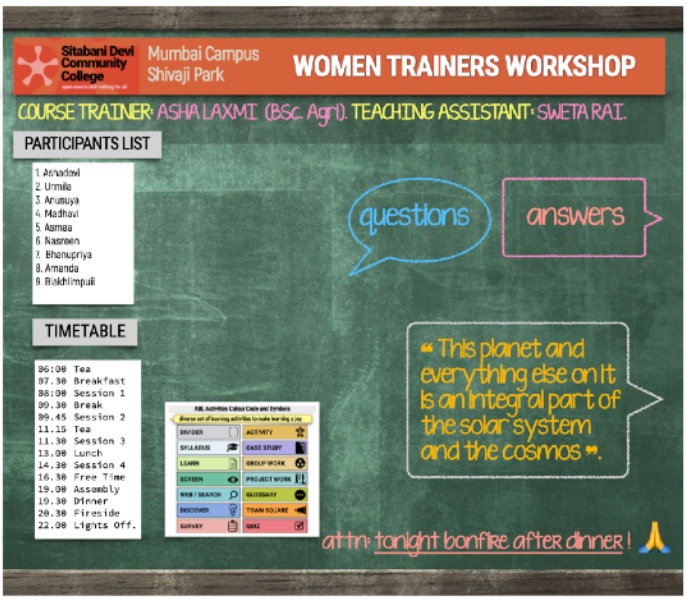
603. THE LEARNING WALL:

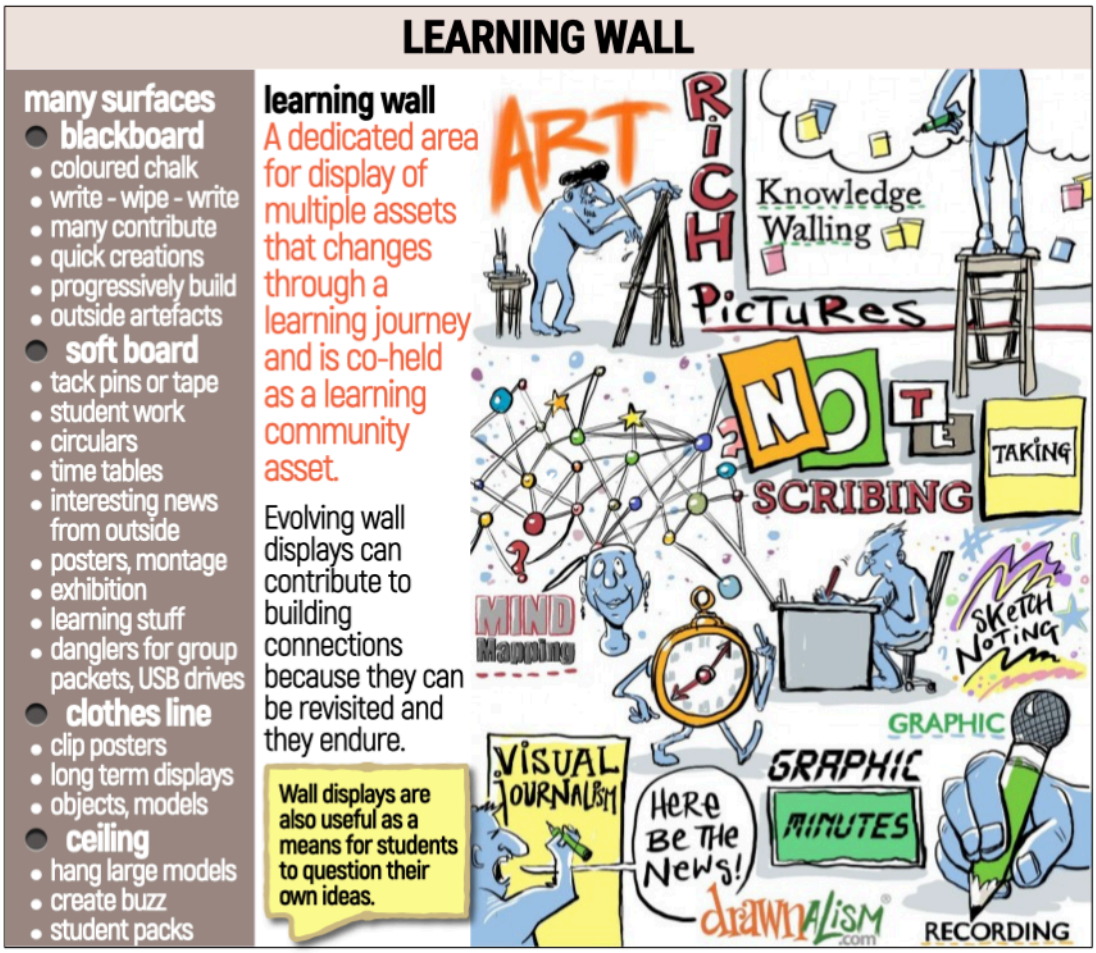
603.1. The blackboard is replaced by the Learning Wall that has contributions both by the facilitator and the students.

LEARNING WALL

- It is a community asset to share learning assets and information.
- Variety of surfaces become a learning wall - the blackboard, a wall, noticeboards or just a wash-line with clips.
- The content is dynamic and changes as students and faculty add or remove objects.
- The Learning Wall generates tremendous interest and motivation.

MOCKUP OF A LEARNING WALL





604. STUDENT PERSONAL LEARNING NOTEBOOK.

604.1. Extensive adaption of the format for a student interactive journal has been developed by Deborah Parizek, Henry Ford Learning Institute (HFLI), Detroit [www.hfli.org].

INTERACTIVE STUDENT NOTEBOOKS (ISNS)

ISNs are a long-held, effective tool for teachers and students to gather, organise, synthesise, and analyse information they learn through the variety of learning experiences and tasks provided to them. Students can keep track of their personal learning, identify patterns within their learning, generate new and creative ideas from that learning, and reflect upon their immediate role as a learner and their longer term approach to developing their ideas, skills and competencies.

What does an Interactive Student Notebook / Journal look like?

Interactive Student Notebooks are deeply individualised records of student learning, growth, accomplishment and reflection. As such, no one Student Journal looks like the next. That said, there are certain consistent elements:

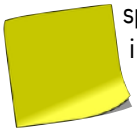
- No traditional text lines (either blank sketching pages or graph paper), a minimum of 100 pages, bound together, and with a hard surface cover;
- An opening title page that identifies the owner of the journal, the supervising teacher or mentor and a way to return it to the adult or school if found;
- Clear start and end to each project, which counts as a “chapter”;
- Clear title, date and frame of assignment for each entry;
- Colourful combination of text, sketches and external resources affixed to the pages;
- Personalised cover(s).

604.2. Tools students need on a regular/daily basis to build their Student Journal include:

- The journal itself
- A writing instrument that doesn't smear easily (ink pen or pencil)
- Highlighter
- Glue stick
- Access to a stapler
- Access to scissors

Student Journal Special Tools :

- **Informational stickers** (brainstorming rules, interview quick notes, arc of storytelling, etc) – these stickers provide a quick way to have students include a specific chart, image or set of information into their journals that supports their immediate work.



- **Round Process Point stickers** – these "tag sale" stickers indicate visually that here is work on ideating, here is work on empathy and so forth. Assign each phase of the Student process a colour and keep that colour throughout the class. It helps students to track that we are working fluidly with the overall process, using tools and strategies when they support meaningful design needs. This helps us assess that students are being mindful of the process overall.

STRUCTURE OF NOTEBOOK

Inside front cover: you should find a schedule of dates that reflect each time the Student journal was turned in for review and assessment + the total points earned for each assessment. Several examples:

(21/01/15) 75/80 points – *Great job! You only missed one check-in.*
(02/09/15) 82/90 points – *Missing 2 items. Your reflection on empathy was thoughtful and shows growth in your understanding.*
(03/03/15) 95/100 points – *Fantastic! Remember to supplement your POV statements with input from further research and prototyping feedback.*

The first page: of the actual Student Journal should be its **Title Page** –including the name of the course, the author/creator of the Student journal, the course title and class period/block offered, and the way to return the journal to the adult or school if found.

There will be a few pages in that front section in which students capture information about the notebook set up and purpose – providing reminders of the purpose and practices associated with the Student Journal, as well as immediate practice with how to use the Student Journal.

Each Student assignment to follow will get its own assignment title page, complete with the name of the assignment, a visual image that connects to that challenge and key identifying language for that experience.

These title pages will all show up on the right side of the Student Journal. Encourage /require students to provide visual images on the associated page – both to create ownership and to support visual synthesis of the learning that occurred throughout the project.

Additional ways to personalise the Student journal – their imagination is the limit:

- Continue to decorate the cover
- Decorate the binding – spiral in some ribbon, duct tape the edges, re-bind
- Add tabs with symbols, unique folding options on used pages, inventive pockets or a special bag in which to carry the journal

604.3. RIGHT SIDE – LEFT SIDE: The notebook is structured into the 'left side' and the 'right side' with crucial differentiation. Interactive Student Journals *create a structure* by which students record and process information in ways that rely on a consistent organisational structure.

RIGHT AND LEFT SECTIONS

Students use the right side of their journal **for factual content:** notes from direct instruction, field observations, and discussions; research findings; process diagrams; outside artefacts being added to the journal; and so forth. These are considered **"input".** Teachers help students learn to structure that information and work with it to generate their own outcomes and ideas.

Students use the left side of the Student Journal to support students' **deeper understanding of and engagement** with the new material or information. These left-side activities are tied to the objective information on the opposing right side page as much as possible and can include such activities and learning tasks as sketches, diagrams, flow charts, self-generated metaphors, annotated drawings, personal reflections, new questions, position statements, cartoons, poems, or other creative activities associated with encouraging **higher order thinking** and **finding personal relevance.**

RIGHT SIDE EXAMPLES – *suggestions for what you can do with the right side and strategies for improving or coaching better information capture for students.*

1. **Note taking (lecture, textbook chapter, article, observed activity, film, etc):**
- Highlight important or noteworthy information after the first capture;
- Review notes with a partner to fill in gaps or address questions;
- Define vocabulary, pose questions or add a summary heading/statement in the margins;
- Use multiple strategies for capturing the information – an outline, a word web, a diagram or graphic organiser, a sketch.

2. **Annotated resource:**
- Affix the resource into the Student journal;
- Read and highlight important information;
- Create summaries of paragraphs or make margin notes throughout the article;
- Create section titles, review questions, or discussion topics for the article;
- Build a visual representation of the article.

3. **Annotated visual resource (picture, photograph, map, work of art):**
- Affix the resource into the Student journal or sketch the image;
- Label the image with facts, details, relevant disciplinary content information;
- Add vocabulary notes to the image;
- Create a title, set of "teacher notes".

4. **Field Study Resources (sketches, data, photos, observation notes):**
- Add information from the field, then supplement with strategies as outlined above.

5. **Question and answer sessions (interviews, talks by guest experts):**
- Capture a prepared outline of questions;
- Capture information from the speakers' answers – supplement with strategies as outlined above.

LEFT SIDE EXAMPLES – *suggestions for what you can have students do on the left side of their Student journals to deepen understanding and conceptual knowledge.*

1. Review and Preview (RAPs):

2-3 min response to a question that reviews what was recently learned or sets an anticipatory frame for what we are going to focus on in the immediate future. Use these as a warm-up/bell work activity while taking attendance or checking on recently absent students.

- Write your own definition of empathy from your notes from yesterday. Compare that with a partner's and revise it as you see fit.
- What was the most interesting story you learned from your interview yesterday?
- Describe how your POV statement matches (or doesn't match) the criteria we use to identify a strong starting point.
- Sketch a famous building in less than 30 seconds.
- Identify five words or phrases you think go with gathering feedback.

2. Show Understanding (SUNs):

2-3 min response to a prompt designed to check learning accuracy and / or acquisition of new knowledge.

- Create a headline of the main point of today's lecture.
- What conclusion can you draw from the speaker's presentation?
- How did the data you gathered while on your field study change your opinion of the importance of reading food labels?
- Imagine and write a short conversation between Person A and Person B that would cause someone to ...
- How do you feel about homeless people after your interviews with clients of the shelter?
- Which do you think is more important – a high paying job or one that pays less, but allows you time to pursue your art?

3. Demonstrate Insights through Visual Expressions (DIVEs)

Strategies to take what you are learning and share it through sketches, visual metaphors, self designed charts/graphs, Venn diagrams, matrices, timelines, flow charts, continuum lines, among other ideas.

- Create a collage of images from your recent interview
- Build an empathy map that provides understanding of how the artisan works with the products.
- Draw a stick figure or sketch to represent your primary user – add details with personal features, quotes or tangible objects that your user would use and say.
- Draw a journey map to show how a customer orders and receives food at the organic food store. Mark points along the way that represent "work-arounds" for any of the people along the way.
- Construct a T-chart that compares demographic information from the two clusters surveyed.
- Create a graph for your data from the field study.

4. Interesting News From Outside (INFOs):

Gathered resources from external sources that relate to a course or Student challenge topic and have an associated learning task.

- Locate and affix a news article on topic; prepare a personal response to the main issue discussed.
- Write a summary of a news article or radio/TV news story; include a personal commentary on the situation.
- Select a visual image and create a dialog box for the people, animals or anthropomorphised objects included.
- Interview a person related to topic and capture your findings.
- Write a review of a film, video or commercial related to our current topic.

Students choose from options with a minimum number of INFOs within the identified time frame and complete learning task associated with it.

VALUE OF THE APPROACH

- While students may not use the complete set of strategies going forward, it does provide them with a way to tackle their own self-directed learning in the future.
- Capturing and processing information is many different ways helps all learners. It doesn't matter if the Student journal content comes from the teacher, from outside experts, from texts or research, from student reflection, for example – all provide ways to deepen one's learning and expertise.
- Gathering, organising and structuring factual information, especially note taking from direct instruction, is not the MOST important aspect of generating learning, but it is a critical piece. Having students capture what they hear or read, review it for further questions or correction, summarise the findings, lay out a plan for a next steps, and review prior to using the information in a new context all substantially increase the value of the original assignment.
- The intentional inclusion of the many, varied types of Student journal assignments which become entries opens up a structured approach to creative thinking and scaffolds students for higher order thinking and conceptual understanding.
- These strategies also compel students to DO SOMETHING with the information as they gather it along the way. This reinforces making connections with their existing knowledge, helps them situate the new content and skills within their existing knowledge base and ties it all together for longer-term integration, understanding and memory.
- Teachers also benefit because the visual nature of the Student journal provides an immediate check on the balance between right and left-side activities. Blank pages on the right indicate a need to pay attention to stronger factual or disciplinary content input; while white space on the left prompts a teacher to pause for students to process their incoming information.

604.4. ASSESSMENT: It is human nature to be appreciated and receive feedback from the teacher. The teacher's assessment keeps the student on track. The teacher is also able to collect data on class performance.

ASSESSMENT

The purpose of the Interactive Student Journal is primarily to support students' organising and documenting their own current and future learning. Thus, the focus is on growth and development, not on mastery with a summative demonstration of knowledge and understanding. Still, the work students do can be captured and acknowledged with a simple points system. To that end, most entries are worth 5 points and are only assessed for completion:
0 points = *not present* / 3 points = *initial or partial completion* / 5 points = *full completion.*

The content of the work and provided any feedback immediately and in real time. After tallying the points at regular intervals; the total is then entered into the formal grade book and used toward calculating a final grade for the quarter, semester or course.

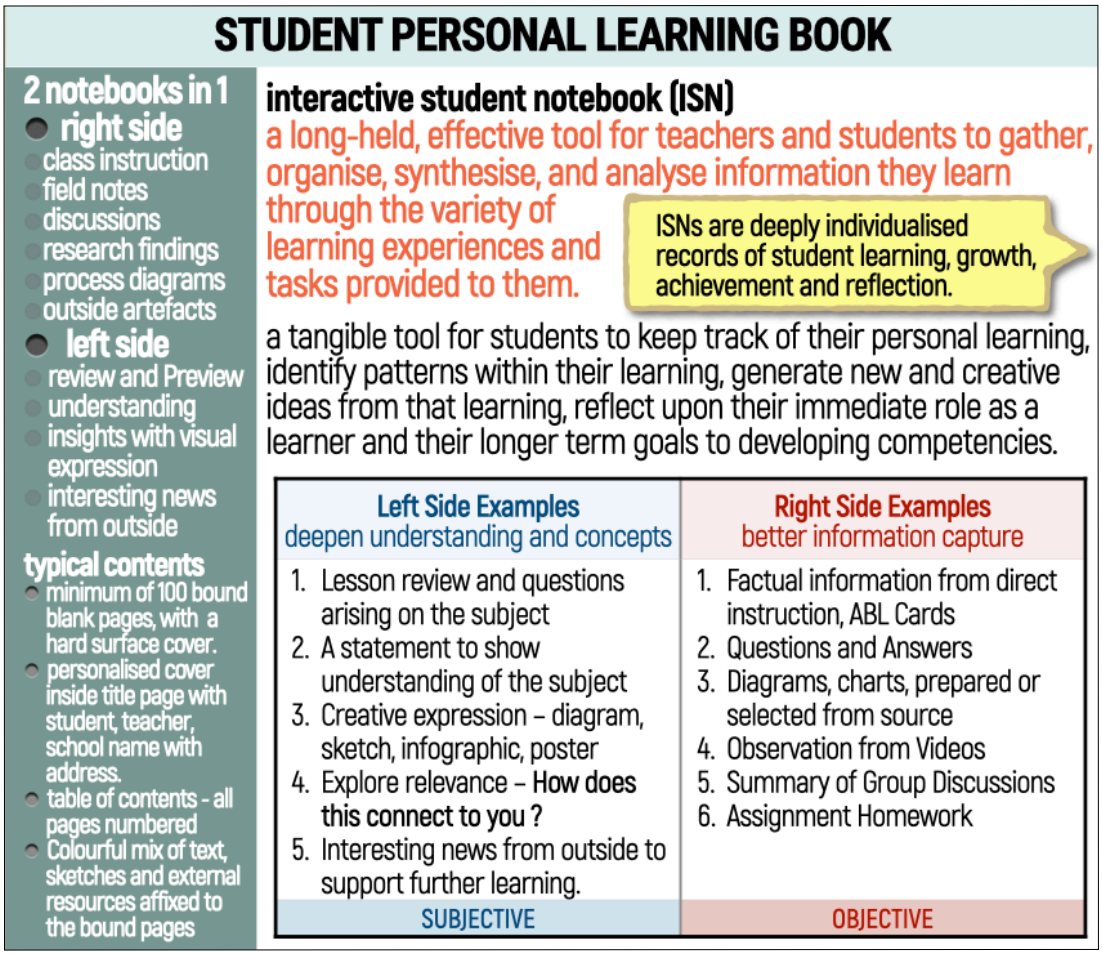
PERIODIC AND CONTINUOUS INTERACTIVE ASSESSMENT

Daily – Students will use their Student Interactive Journals almost every day; and each day is likely to have 1 or more entries. Introduce, provide and/or explain the learning activity and the associated journal entry, then circulate through the students. As a student finished or requested a response, the teacher would take a look and do one of the following: answer questions, clarify the assignment for better understanding, encourage further work or indicate the student has completed what is expected. Draw a line under and initial the end of the entry. This practice only creates evidence that teacher has seen and reviewed the entry. For work that has to be completed in class, this tracking system is quick, personal, difficult/impossible to forge and focused on learning, not grading. Once the practice is well established, early finishing students are empowered with a marker or highlighter and have them provide that entry coaching and confirmation of completion, using their own initials as evidence. The distribution of effort kept class focused on learning and engagement for everyone and provided new learning opportunities for the "checkers."

Periodically – Every two to three weeks (approximately 15 entries), a more comprehensive review of student growth and development and provide them with information regarding their performance in the class. First, create a two-column checklist that includes the titles of all entries that one expect to see in a student's Student journal by reviewing the running list One column enables students to mark each entry they have in their journal; the other is where to mark and record the associated points. Students do this check before they turn in their journals to enable them to locate missing entries, recover and complete a missing entry and remind me of any special circumstances that would affect the total body of work to that point in time, like an extended absence. By its purpose, the journal is to capture and organise student learning, not punish the lack of it – so later entries do earn credit at some level. The learning we have designed should take precedence and not be replaced by other activity with an unclear connection.

The points earned are recorded in the front cover of each student's Student journal with a personal comment so that each can track his or her progress and be able to predict end-of-course performance grades. Also record these interim totals in the grade book for the formal record keeping required.

End of Quarter / Semester / Year – When it comes time to report student achievement for progress reports, report cards or transcripts, include the total of each journal check with that final grade. Students do have one final opportunity to review their complete journal to date and usually requires them to do a final entry in which they reflect on their personal growth and development to date.


STUDENT PERSONAL LEARNING BOOK
2 notebooks in 1
right side
class instruction
field notes
discussions
research findings
process diagrams
outside artefacts
left side
review and Preview
understanding
insights with visual expression
interesting news from outside
typical contents
minimum of 100 bound blank pages, with a hard surface cover.
personalised cover inside title page with student, teacher, school name with address.
table of contents - all pages numbered
Colourful mix of text, sketches and external resources affixed to the bound pages
interactive student notebook (ISN)
a long-held, effective tool for teachers and students to gather, organise, synthesise, and analyse information they learn through the variety of learning experiences and tasks provided to them.
ISNs are deeply individualised records of student learning, growth, achievement and reflection.
a tangible tool for students to keep track of their personal learning, identify patterns within their learning, generate new and creative ideas from that learning, reflect upon their immediate role as a learner and their longer term goals to developing competencies.
Left Side Examples
deepen understanding and concepts
1. Lesson review and questions arising on the subject
2. A statement to show understanding of the subject
3. Creative expression – diagram, sketch, infographic, poster
4. Explore relevance – How does this connect to you ?
5. Interesting news from outside to support further learning.
SUBJECTIVE
Right Side Examples
better information capture
1. Factual information from direct instruction, ABL Cards
2. Questions and Answers
3. Diagrams, charts, prepared or selected from source
4. Observation from Videos
5. Summary of Group Discussions
6. Assignment Homework
OBJECTIVE

IV - GROWTH AND DEVELOPMENT OF THE ACTIVITY LEARNING METHOD

700 | SERVICE
EDUCATION AS A SERVICE

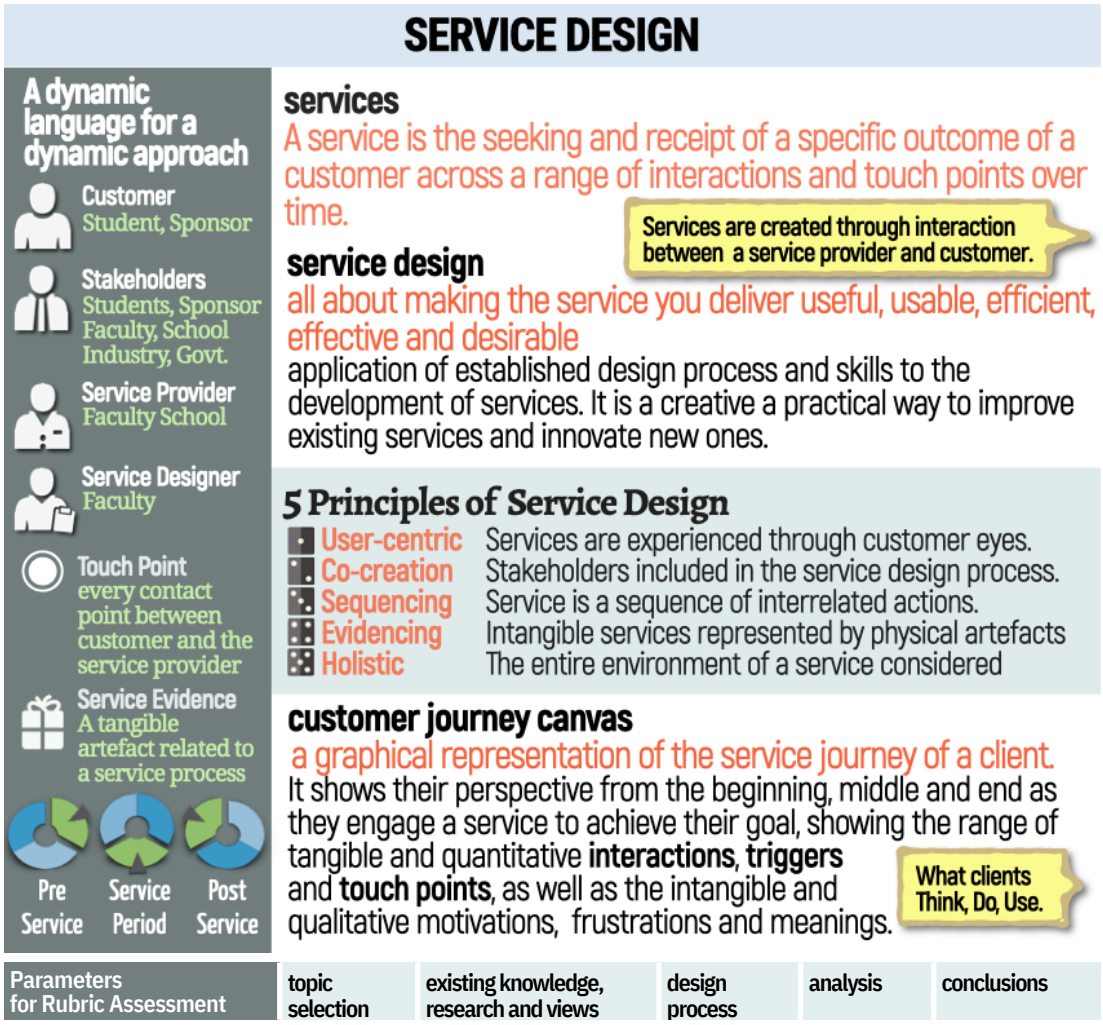
701. SERVICES

701.1. In both traditional and modern economic orders, there is a troika of agriculture, manufacturing and services. The world economy is evolving into a service-driven economy.

WORLD BANK 2019 REPORT

Services now account for over 52 % of GDP – a higher share than manufacturing – up from 41 % in 2005. In India, services now make up almost **50 per cent of GDP**, up from just 30 per cent in 1970.

701.2. • SERVICE DESIGN is centred on delivering value and comprises of a constellation of innovative design processes and skill.
• SERVICE LOGIC has its unique set of terms that reflects the shift of marketing from logistics to a customer-driven product and service delivery.
• SERVICE DELIVERY can consists of many core and supplementary services that the customer expects in the service - client interaction. Delivery is a flow over a time axis and is not just a point at a fixed time and place. Envisioned as journey, the CLIENT JOURNEY CANVAS comprises of several interactions, triggers and touchpoints.


SERVICE DESIGN
A dynamic language for a dynamic approach
Customer
Student, Sponsor
Stakeholders
Students, Sponsor
Faculty, School
Industry, Govt.
Service Provider
Faculty School
Service Designer
Faculty
Touch Point
every contact point between customer and the service provider
Service Evidence
A tangible artefact related to a service process
Pre Service
Service Period
Post Service
services
A service is the seeking and receipt of a specific outcome of a customer across a range of interactions and touch points over time.
Services are created through interaction between a service provider and customer.
service design
all about making the service you deliver useful, usable, efficient, effective and desirable
application of established design process and skills to the development of services. It is a creative a practical way to improve existing services and innovate new ones.
5 Principles of Service Design
User-centric Services are experienced through customer eyes.
Co-creation Stakeholders included in the service design process.
Sequencing Service is a sequence of interrelated actions.
Evidencing Intangible services represented by physical artefacts
Holistic The entire environment of a service considered
customer journey canvas
a graphical representation of the service journey of a client.
It shows their perspective from the beginning, middle and end as they engage a service to achieve their goal, showing the range of tangible and quantitative interactions, triggers and touch points, as well as the intangible and qualitative motivations, frustrations and meanings.
What clients Think, Do, Use.
Parameters for Rubric Assessment
topic selection
existing knowledge, research and views
design process
analysis
conclusions

702. SERVICE LOGIC FOR EDUCATION

702.1. In the new world of Student-led education, the flipped model also calls for placing Education in a service logic. Understanding student expectations and how the institution can anticipate these and meet them at the planned nodes is a new skill for institutions.

THE UNIVERSITY EXPERIENCE FRAMEWORK

Irene C L Ng and Jeannie Forbes, School of Business and Economics, University of Exeter (U.K.) -2008

The Elements.

Aside from **product, promotion, place and price (4Ps)**, services involves the extended **7Ps**, where **people, physical evidence and processes** feature in the Service Marketing mix. Within the education context, we propose that *people include academics, administrators, support staff and the students themselves*. The physical evidence would of course be the materials, teaching facilities, accommodation, recreational facilities and the like. Finally, the processes are those to facilitate applications, registration, exceptions, learning activities as well as social activities. These elements come together to produce the core and supplementary services.

The Core Service.

The core service of the university experience is embodied in the learning experience of the student. However, it is important to realise that the learning experience can be mundane and monotonous just as much as it can be a transformative experience. This is because the value of learning is co-created with the student.

- ***The learning experience is co-created.*** In co-creating the learning experience, students play two key roles in creating a service outcome i.e. as a productive resource, and as a contributor to quality, satisfaction and value. As a productive resource, students bring with them their intellect, language and communication skills. A more "resource-rich" student requires less supervision, has greater independence and confidence. As a contributor to quality, satisfaction and value, students can choose the level of effort they wish to expend. Without students' participation and involvement, the desired process and outcome for the student is not possible. It is important though to understand that these two roles are not mutually exclusive.
- ***The learning experience is emergent, unstructured, interactive and uncertain.*** Learning is both an outcome and a process i.e. the learning that is attained and the process through which it is attained are constructed by the student and the teacher. Students often don't know how much they value the learning till they actually begin to learn, a process that can be facilitated by teaching methods that allow, and indeed encourage, time for reflection and analysis of what is being taught.
- ***The learning experience is hedonic*** (*editor. ~joyful*). There is pleasure and adventure when students construct knowledge and emotions also have a role in learning. In addition, research in service tells about the idea of a "journey" in the consumption of a service with connotations of adventure, possessing ideas of legend and heroism. Unfortunately, the hedonic and social aspect of the university experience does not map nicely to processes, procedures and documents within the university or the quality assurance process. The design of 'servicescapes' i.e. the physical facility in which the service is performed, delivered and consumed, can potentially make a huge difference to a student's university experience.

The Supplementary Service.

Supplementary services such as application processes, payment of fees, campus facilities, staff helpfulness and student accommodation all play a role to facilitate the core service experience. Commonly referred to as hygiene services i.e. services that meet basic needs and that, when not met, can cause dissatisfaction amongst students. Yet, meeting these needs does not make students satisfied - it merely prevents them from becoming dissatisfied. Clearly the core cannot function effectively without the supplementary services and although we categorise them separately, the two often interact dynamically in the construction of the university experience.

---

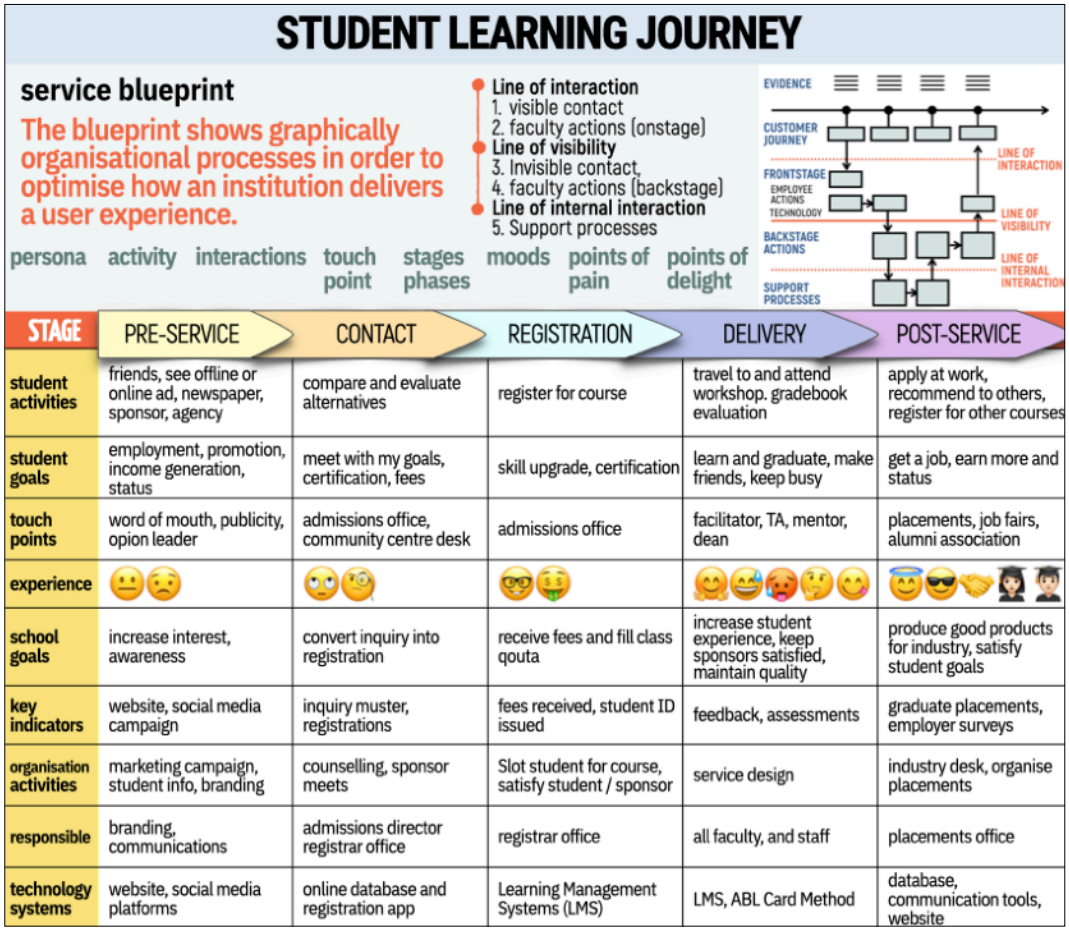
703. THE STUDENT LEARNING JOURNEY

703.1. A blueprint of Student Learning Journey is a visual cognitive map that considers the learning experience as a journey and meets with the expectations of outcome-led education principles.

703.2. The map tracks have several parameters - both objective and subjective.
- student activities
- student goals and expectations
- touchpoints
- the emotive experience
- institutional goals
- key indicators
- organisation activities
- department / person responsible
- technology / systems to be mobilised

703.3. Along the time axis, the stages are divided into:
- Pre-Service
- Contact
- Registration
- Delivery
- Post Service

703.4. The map would be prepared at a *faculty group seminar* and shared with the institutional members, bringing everyone on the same page. Rollouts are anticipated and deployed as required.



STUDENT LEARNING JOURNEY

service blueprint

The blueprint shows graphically organisational processes in order to optimise how an institution delivers a user experience.

Line of interaction
1. visible contact
2. faculty actions (onstage)

Line of visibility
3. Invisible contact,
4. faculty actions (backstage)

Line of internal interaction
5. Support processes

persona activity interactions touch point stages phases moods points of pain points of delight

STAGE	PRE-SERVICE	CONTACT	REGISTRATION	DELIVERY	POST-SERVICE
student activities	friends, see offline or online ad, newspaper, sponsor, agency	compare and evaluate alternatives	register for course	travel to and attend workshop. gradebook evaluation	apply at work, recommend to others, register for other courses
student goals	employment, promotion, income generation, status	meet with my goals, certification, fees	skill upgrade, certification	learn and graduate, make friends, keep busy	get a job, earn more and status
touch points	word of mouth, publicity, opion leader	admissions office, community centre desk	admissions office	facilitator, TA, mentor, dean	placements, job fairs, alumni association
experience	😐😟	🙄🤔	🤓🤑	🤗😅🥵🤔😋	😇😎🤝👩‍💼👨‍💼
school goals	increase interest, awareness	convert inquiry into registration	receive fees and fill class qouta	increase student experience, keep sponsors satisfied, maintain quality	produce good products for industry, satisfy student goals
key indicators	website, social media campaign	inquiry muster, registrations	fees received, student ID issued	feedback, assessments	graduate placements, employer surveys
organisation activities	marketing campaign, student info, branding	counselling, sponsor meets	Slot student for course, satisfy student / sponsor	service design	industry desk, organise placements
responsible	branding, communications	admissions director registrar office	registrar office	all faculty, and staff	placements office
technology systems	website, social media platforms	online database and registration app	Learning Management Systems (LMS)	LMS, ABL Card Method	database, communication tools, website

800 | ASSESSMENT
THE LIFE LONG LEARNER

801. ASSESSMENT OF THE LEARNER

801.1. The rapid development in all spheres of work means that the student has a short span to actually be skilled and work at a job, before re-skilling and up skilling is required. In the new future, even new skills and vocations may become necessary to remain relevant in the work sphere. So the role of true education is be develop the faculties for self-learning - a new intelligence required in the age of disruption.

801.2. With this mandate, progressive educators developed the idea of lifelong learning.

LIFE LONG LEARNING

European Commission, 2001
- All learning activity undertaken throughout life, with the aim of improving knowledge, skills and competences within a personal, civic, social and/or employment-related perspective"

P. Jarvis (*quoted in the* **The Oxford Handbook of Lifelong Learning, 1st edn.**)
- The combination of processes throughout a life time whereby the whole person—body (genetic, physical and biological) and mind (knowledge, skills, attitudes, values, emotions, beliefs and senses)—experiences social situations, the perceived content of which is then transformed cognitively, emotively or practically (or through any combination) and integrated into the individual person's biography resulting in a continually changing (or more experienced) person.

Embracing a Culture of Lifelong Learning - Report. (2020)
UNESCO Institute of Lifelong Learning
- Increasingly, the global community acknowledges that lifelong learning – available to all, at every stage and in every sphere of people's lives – is key to addressing the multiple challenges faced by humanity. Lifelong learning fosters people's capacity to deal with change and to build the future they want. This is profoundly important given the disruption and uncertainly resulting from the familiar threats and opportunities of demographic change, the climate crisis, the rapid advance of technology and, more recently, the COVID-19 pandemic.
- The growth of populist politics, the deliberate spread of disinformation and the resulting threat posed to democracy highlight the crucial role of lifelong learning in fostering active, informed citizenship. Lifelong learning also improves employability and entrepreneurship through skills development and creativity, enhances public health and well-being, and builds more cohesive and resilient communities. Lifelong learning is, in short, an important contributor to sustainable development, globally, and at national and local levels.

801.3. In the framework of continuous and comprehensive evaluation, a set of scores versus competencies is required. It is a *shared* assessment tool for faculty and students. A set of criteria and expectations at different scoring values is prepared. This is called the rubric. A weightage is given to each criteria, in the over all scoring. By deploying rubrics based assessments, as in formal education, a robust rigour is added to the skill training sector.

LIFE LONG LEARNING VALUES RUBRIC

rubric a scoring guide used to evaluate the quality of students' constructed responses. Rubrics usually contain evaluative criteria, quality definitions for those criteria at particular levels of achievement, and a scoring strategy.

- The Rubric is a transparent and fair evaluation criterion for the student and a faculty guide.
- Divided into 4 zones, the mark is given as a grade. It is a holistic assessment process.
- In adult skill training, the life long learner is credited for previous life work experience.
- The rubric developed by a panel of international educators looks for specific traits.

Criteria	(%)	Exceeds Expectation	Meets Expectation 61 to 80 %	Below Expectation 40 to 60 %	Fail Grade 0 to 40%
		Lower Range: 81	Lower Range: 61	Lower Range: 40	Lower Range: 0
topic selection	10	Explores a topic in depth, yielding a rich awareness and/ or little-known information indicating intense interest in the subject.	Explores a topic in depth, yielding insight and/ or information indicating interest in the subject.	Explores a topic with some evidence of depth, providing occasional insight and/ or information indicating mild interest in the subject.	Explores a topic at a surface level, providing little insight and/ or information beyond the very basic facts indicating low interest in the subject.
existing knowledge, research and views	10	Identifies a creative, focused, manageable topic addresses potentially significant yet previously less explored aspects of the topic.	Identifies a focused and manageable/ doable topic that appropriately addresses relevant aspects of the topic.	Identifies a topic that while manageable/ doable, is too narrowly focused and leaves out relevant aspects of the topic.	Identifies a topic that is far too general and wide ranging as to be manageable and doable.
design process	25	All elements of the methodology or theoretical framework are skillfully developed. and these may be synthesised from across disciplines / from relevant sub-	Critical elements of the methodology or theoretical framework are appropriately developed , however , more subtle elements are ignored or unaccounted for.	Critical elements of the methodology or theoretical framework are missing, incorrectly developed , or unfocused.	Inquiry design demonstrates a misunderstanding of the methodology or theoretical framework.
analysis	25	Organises and synthesises evidence to reveal insightful patterns, differences, or similarities related to focus.	Organises evidence to reveal important patterns, differences, or similarities related to focus.	Organises evidence but is not effective in revealing important patterns, differences, or similarities.	Lists evidence , but it is not organised and/ or is unrelated to focus.
conclusions	30	States a conclusion that is a logical extrapolation from the inquiry findings.	States a conclusion focused solely on the inquiry findings, The conclusion arises specifically from and responds specifically to the inquiry findings.	States a general conclusion that, because it is so general, also applies beyond the scope of the inquiry findings.	States an ambiguous, illogical, or unsupportable conclusion from inquiry findings.

802. GRADUATE ATTRIBUTES

802.1. The idea of Graduate Attributes (GA) stems from the Outcome Based Education framework. As per industry requirements, a set of realistic competencies must be formulated. The GA then pulls the entire training supply chain to providing the resources required to achieve this standard.

802.2. In a survey to find generic GAs prevalent amongst universities, four increasingly complex, qualitatively distinct understandings or categories of description emerged from the analysis of the transcripts.

GENERIC ATTRIBUTES OF GRADUATES - SIMON C. BARRIE, UNIVERSITY OF SYDNEY.

1. Some academics express an understanding of generic graduate attributes as: **basic precursory abilities** students bring to university and which provide a minimum base to which can be added the discipline knowledge of a university education.
2. Other academics express an understanding of graduate attributes that goes beyond this to encompass additional **general functional abilities** and personal skills that can usefully complement the discipline specific learning outcomes of a university education.
3. Other academics understand generic attributes to be more than useful additional general skills, rather they are specialised variants of such general skills that are essential in the **application of discipline knowledge** and the translation of university learning to unfamiliar settings thus usefully transforming the products of university learning.
4. Some academics express a yet more complex understanding of generic attributes as **enabling abilities and aptitudes** that lie at the heart of scholarly learning and knowledge, with the potential to transform the knowledge they are part of and to support the creation of new knowledge and transform the individual.

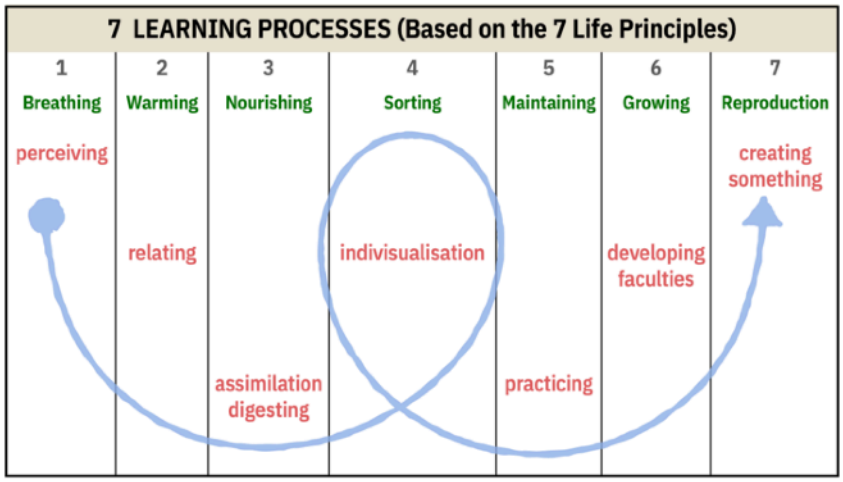
---

803. AN INTEGRAL VIEW OF THE STUDENT

803.1. A integral view of the student with cognitive (*thinking*), affective (*feeling*) and psychomotor skills (*doing*) means that learning will occur at all 3 levels. Outcomes are processes, rather than just discreet measurements as per the formal education GAs assessments.

SEVEN LIFE PROCESSES: SOURCE: 'AWAKENING THE WILL', COENRAAD VAN HOUTEN

There are 7 life processes that are evident as natural processes in all living systems. This view emerged from early 19th century Goethean science and has now evolved into a modern version, 'Theory U' by C. Otto Scharmer, MIT Sloan School of Management.



---

7 LEARNING PROCESSES		
Stage	**Road blocks**	**Response**
1 **PERCEIVING** (breathing in) The learning process begins by interfacing with the world around us. The external is internalised. The mind must concentrate its attention on the observed.	• *unable to take in words or images;* • *prejudices for instant dislike;* • *dependency or counter-dependency;* • *attention deficiency;* • *pre-skills / literacy inadequate.*	• foster basic attitude of wonder, amazement and reverence; • baseline test to determine outliers and laggards - options for remedial paths.
2 **RELATING** (warming) A relationship with the subject matter is established. Every perception is tinted subjectively with approval or a disapproval. A frame of reference is created to process this sensory input.	• *indifference;* • *lack of imagination;* • *spoon-feed - want notes, blackboard delivery;* • *"know it already".*	• teacher must connect with the learner's world of experiences; • learner connects with their needs and expectations; • feedback from class triggers; revision of scope; • learners plan their unique journeys.
3 **ASSIMILATING - DIGESTING** (Nourishing) Adults learn to break down the complexity and reduce it to a level that they can process.	• *passive taking in;* • *working with memorisation without understanding;* • *not asking questions, fear of asking teacher;* • *projecting authority and power role on teacher.*	• connecting new learning with past experiences; • finding practical examples; • artistic expression of the learning; • analytical assessment of learning leading to claiming ownership of the learning -, "*What I learnt from. this is ... "*.
4 **INDIVIDUALISATION** (Sorting) What is found 'nourishing', of value to the learner existential and spiritual goals is retained. It has 'seed' character. What is found to be useless is discarded. What has been taken from the external in a learning way, connected with and digested, becomes truly ones own. Something 'new' is born.	• *dependency on authority - religious, spiritual or expert;* • *belief that the self cannot generate their own knowledge;* • *inability to cope with learning in a changing and dynamic world.*	• removing the veneration for 'content'. Instead content becomes a means to learning and development.; • move away from an 'answer-question' (information) to that of a 'question-culture'. Answers conclude the learning process. True questions have a future; • keep a note of the inspirational moments, 'break-throughs' and brilliant ideas for the next stages.
5 **PRACTISING** (Maintaining) Typical experiences with learning are the insights, experiences or impulses that are quickly forgotten or just fade away. By regular, rhythmically repeated learning activities, the new seed steadily develops. There must be a motivation and an aim to develop a new faculty.	• *lack of attention, persistence and patience;* • *cannot carry out an exercise as per precise instructions;* • *need for instant results and gratification.*	• small exercises with regular practice leading to ability to do more detailed exercises; • Explanation of rationale to carry out the practice; • Strong will force (motivation) from the previous stage.

7 LEARNING PROCESSES		
Stage	**Road blocks**	**Response**
6 **GROWING FACULTIES** (Growing) Synthesis of previous stages leading to self development and skill building 3 fold growth in the cognitive, affective and psychomotor abilities Conative domain - spiritual component develops - the humanising spirit. True metamorphosis leading to efflorescence	• *Old routines prevent the metamorphosis of new faculties;* • *there is security in fixed ideas and 'right' and 'wrong' way of doing things;* • *culture of quick and effective results - impatience of not letting previous stages to mature.*	• diversity of learning activities; • evaluation of learning processes by learner.
7 CREATING SOMETHING NEW (Reproducing) Creating a demonstration of learning from the self-learning, unique to each learner. The first stage of 'breathing in' has been 'humanised' - assimilated, individualised, matured, fostered within - to create an individualised artefact.	• *wanting to be perfect, afraid of making mistakes;* • *unwilling to take risks;* • *not willing to put in the effort - cheat, 'cut-copy-paste'.*	• course completion requirement; • mentoring support and appreciate inquiry frame by jury. discover, appraise and value what "gives life", focusing on the positive qualities that they identify and affirming them as instrumental to future progress. • **Discover**, appraise and value what "gives life", focusing on the positive qualities that they identify and affirming them as instrumental to future progress. Dreaming about the best of what might be, both through building upon those qualities identified in the discovery phase, as well as through exploring new possibilities and images associated with a preferred or ideal future. **Design** (co-construct) a future built on excellence and merit through strategies appropriate to the life path of the learner. **Destiny,** participants share ways in which the shared image of an ideal future can be realised and operationalised. • focus on innovation and action that will empower individuals and enhance organisational life; • build on the sense of accomplishment, a sense of pride.
 Godly Light | Christ-Sun | Warm Our hearts Enlighten Our heads | That good may become What we from our hearts are founding What from our heads Direct with single will. *Rudolf Steiner, Foundation Stone Meditation (Christmas 1923).*		

804. ENRICHMENT OF LEARNING PROCESSES BY YOGA DARŚANA

804.1. The 7 learning processes are enriched by the contribution of the ancient wisdom recorded by Patañjali as the doctrine of *aṣṭāṅgayoga* (8 - fold in Yoga Sūtra):

AṢṬĀṄGA YOGA. PATAÑJALI IN YOGA SŪTRA

The eight aspects are:

1. Yama	*(life code)*	abstaining from harming others, uttering falsehoods, stealing, incontinence and greed.
2. Niyama	*(life order)*	observing purity, contentment, frugality, study and surrender to the Divine.
3. Āsana	*(posture)*	posture that is steady and comfortable, relaxed and effortless, at repose.
4. Prānāyāma	*(breathing)*	inhalation, exhalation and transition between the two, awareness of the vital energy.
5. Pratyāhāra	(withdrawal)	the mind is withdrawn from engagement with sense objects, the sense organs also imitate the mind and withdraw inwards.
6. Dhāraṇā	*(concentration)*	focusing the mind in one place.
7. Dhyāna	*(meditation)*	uninterrupted flow of the thought-stream towards the object of meditation
8. Samādhi	*(absorption)*	when the true nature of the object is perceived without any thought of the perceiver.

804.2. The correspondence of *aṣṭāṅga yoga* with the 7 life processes is:

		1	2	3	4	5	6	7
7 Life Processes		Breathing	Warming	Nourishing	Sorting	Maintaining	Growing	Reproduction
7 Learning Processes		perceiving	relating	assimilation digesting	individualisation	practicing	developing faculties	creating something new
Aṣṭāṅga Yoga	Yama Niyama Āsana	**Prānāyāma**	**Pratyāhāra**	**Dhāraṇā**	**Dhyāna**			**Samādhi**
	1 -3	4	5	6	7			8

804.3. The contribution of Yoga to this view are the steps nos. 1 to 3: *Yama*, *Niyama* and *Āsana*. It establishes the essential nature of the learner before they begin and during the learning experience. This fits into the precursory abilities listed in the GAs.

804.4. *Yama*: The 5 guiding principles - a moral code - for any human life.

- Non-violence: (*ahimsā*) peace and love for all creation;
- Truth: (*satya*) being true to oneself, and to others;
- Non-Stealing: (*asteya*) not to take what belongs too others;
- Divinity: (*brahmacharya*) focus on the Divine, not worldly affairs;
- Non-Possession: (*apigraha*) break away from obsession to possess.

804.5. *Niyama*: The order and rules for a life of self-discipline.

- Hygiene: (*śauca*) bodily and mental cleanliness;
- Contentment: (*santoṣa*) satisfied with one's state;
- Frugalism: (*tapa*) willful self denial, minimalism;
- Self-learning (*svādhyāya*) life long study and learning;
- Surrender (*iśvara praṇidhānāni*) surrender to the divine benevolence.

804.6. *Āsana*: At a physical level, the āsana is a posture that is in equilibrium (*stira*) and comfortable (*sukham*). It is also a state of engaging with the learning process. Harmonics in the mind-field dissolve and the mind is primed for perception; it is a transformative state.

- Yoga Sutra(1.2) : *yogaś-citta-vṛtti-nirodhaḥ*

804.7. These contributions of a moral code (*yama*) , an order (*niyama)* and principled life and a state of readiness for engagement (*āsana*) are doorways to the learning processes.

804.8. Those learners with some level of the personal attributes of *yama* and *niyama* will find it easier to assume the state of engagement with the student learning journey. It is a basic requirement to have the values (*sanskāra*) instilled from the parent and sponsor group. However, the organisers, faculty and staff cannot determine the entry barriers for these intangible attributes. So the unstated task for the teaching group is to instil / reinforce these values and create order into the training itself. This exposure and experiential self-learning will be a seed that will germinate in times to come.

805. EVALUATION BY STUDENT

805.1. External assessors will certify that the graduate has achieved the prescribed skill level and award certification. However the best evaluator is the learner. The evaluation by the learner will be on several axes:

A. Existential:
   1) Did the training meet the short term and long term goals of the learner?
   2) Is there a sense of achievement and pride in reaching a point of excellence?
   3) What was the feeling at the 'entry in' and now at the 'exit out' from the course?
   4) Has exposure to personal attributes during training resonated with the learner's value-set ? Would the learner like to develop these further after the training ?

B. Job:
   1) Did the training provide the specific competencies required for the job?
   2) If failed, then what will the strategies post-course?

C. Content Integrity:
   1) Did the learner produce the learning assets like student notebooks, project works, prototypes and field work assignments?

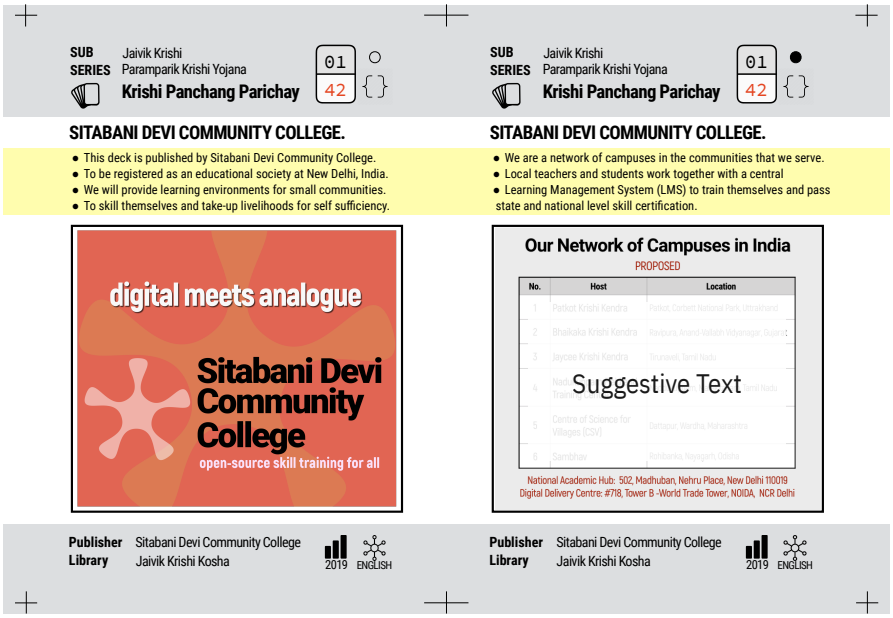
D. Process Integrity:
   1) How did the learner experience each of the stages of the learning processes?
   2) How was the experience at the transitions from one stage to the other? What were the roadblocks?

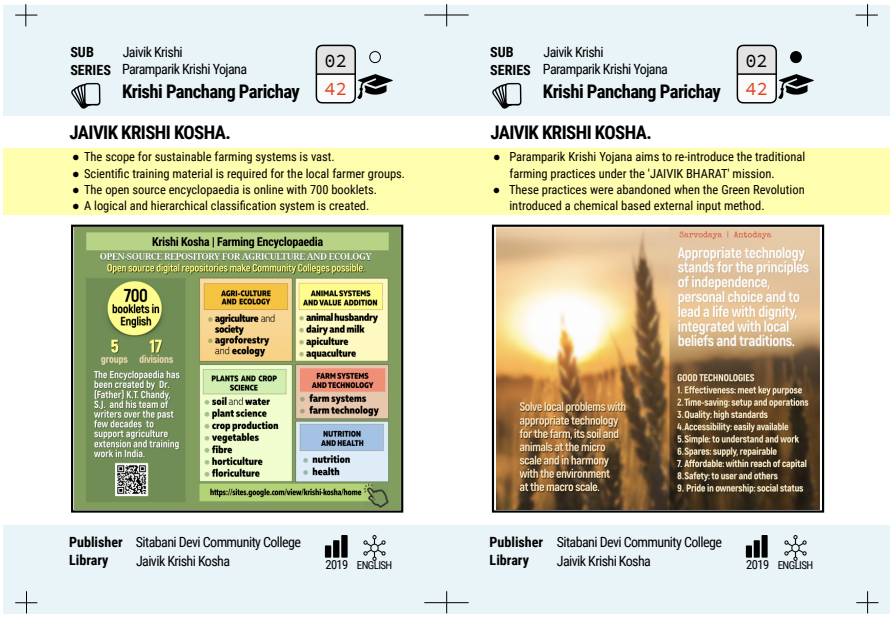
E. Pedagogy:
   1) Did the student-led learning work for the learner?
   2) How do the learner make the transition, if any, from dependency to interdependence?
   3) How was the experience in working with the peers in diverse configurations ?

V- APPENDIX A

A. SHORT TERM COURSE- PLANTING CALENDAR

A.1. This is a card deck to introduce the Planting Calendar as per biodynamic farming method to young farm advisors. It is planned for weekend campus study with weekday field work.


SUB SERIES Jaivik Krishi Paramparik Krishi Yojana
Krishi Panchang Parichay
01 42
SITABANI DEVI COMMUNITY COLLEGE.
• This deck is published by Sitabani Devi Community College.
• To be registered as an educational society at New Delhi, India.
• We will provide learning environments for small communities.
• To skill themselves and take-up livelihoods for self sufficiency.
digital meets analogue
Sitabani Devi Community College
open-source skill training for all
Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH
SUB SERIES Jaivik Krishi Paramparik Krishi Yojana
Krishi Panchang Parichay
01 42
SITABANI DEVI COMMUNITY COLLEGE.
• We are a network of campuses in the communities that we serve.
• Local teachers and students work together with a central
• Learning Management System (LMS) to train themselves and pass state and national level skill certification.
Our Network of Campuses in India
PROPOSED
No. Host Location
Suggestive Text
National Academic Hub: 502, Madhuban, Nehru Place, New Delhi 110019
Digital Delivery Centre: #718, Tower B -World Trade Tower, NOIDA, NCR Delhi
Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH


SUB SERIES Jaivik Krishi Paramparik Krishi Yojana
Krishi Panchang Parichay
02 42
JAIVIK KRISHI KOSHA.
• The scope for sustainable farming systems is vast.
• Scientific training material is required for the local farmer groups.
• The open source encyclopaedia is online with 700 booklets.
• A logical and hierarchical classification system is created.
Krishi Kosha | Farming Encyclopaedia
OPEN-SOURCE REPOSITORY FOR AGRICULTURE AND ECOLOGY
Open source digital repositories make Community Colleges possible.
700 booklets in English
5 groups 17 divisions
The Encyclopaedia has been created by Dr. (Father) K.T. Chandy, S.J. and his team of writers over the past few decades to support agriculture extension and training work in India.
AGRI-CULTURE AND ECOLOGY
agriculture and society
agroforestry and ecology
ANIMAL SYSTEMS AND VALUE ADDITION
animal husbandry
dairy and milk
apiculture
aquaculture
PLANTS AND CROP SCIENCE
soil and water
plant science
crop production
vegetables
fibre
horticulture
floriculture
FARM SYSTEMS AND TECHNOLOGY
farm systems
farm technology
NUTRITION AND HEALTH
nutrition
health
https://sites.google.com/view/krishi-kosha/home
Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH
SUB SERIES Jaivik Krishi Paramparik Krishi Yojana
Krishi Panchang Parichay
02 42
JAIVIK KRISHI KOSHA.
• Paramparik Krishi Yojana aims to re-introduce the traditional farming practices under the 'JAIVIK BHARAT' mission.
• These practices were abandoned when the Green Revolution introduced a chemical based external input method.
Sarvodaya | Antodaya
Appropriate technology stands for the principles of independence, personal choice and to lead a life with dignity, integrated with local beliefs and traditions.
Solve local problems with appropriate technology for the farm, its soil and animals at the micro scale and in harmony with the environment at the macro scale.
GOOD TECHNOLOGIES
1. Effectiveness: meet key purpose
2. Time-saving: setup and operations
3. Quality: high standards
4. Accessibility: easily available
5. Simple: to understand and work
6. Spares: supply, repairable
7. Affordable: within reach of capital
8. Safety: to user and others
9. Pride in ownership: social status
Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB SERIES Jaivik Krishi Paramparik Krishi Yojana
Krishi Panchang Parichay
03 42

COURSE BUMPER: OUTCOME BASED EDUCATION.

- All our coursewares are complaint with the OBE Framework.
- Outcomes are clear, observable demonstrations of student learnings that occur after a significant set of learning experiences.
- They are not values, attitudes, goals or activities.

OUTCOME BASED EDUCATION FRAMEWORK 1

Key Data Sheet For Self Assessment Report (SAR) As Per Requirements Of The National Board Of Accreditation (University Grants Commission)

I.	COURSE	BASICS OF KRISHI PANCHANG (FARM PLANTING CALENDAR)
II.	PROGRAM	Farmer Skill Development Mission
III.	VISION	Jai Vigyan Jai Kisan
IV.	MISSION	To upgrade the the farmer's operating system and to take a rightful place in a global marketplace driven by knowledge. Analogue must meet digital.
V.	GRADUATE ATTRIBUTES	
GA1	Practice sustainable farming with most of farm inputs produced on the farm or exchanged with other peers	
GA2	Use and innovate appropriate technology for farm inputs, farming processes and post harvest value added agro-processing	
GA3	By the use of value added conversion of commodities to products, the farmer can manage a financially viable production unit (the farm)	
GA4	To possess a sense of purpose and place in society as an artisan and meet the needs food, fibre, fuel and fodder for self and others.	

Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB SERIES Jaivik Krishi Paramparik Krishi Yojana
Krishi Panchang Parichay
03 42

COURSE BUMPER: OUTCOME BASED EDUCATION.

- OBE reflects: (1) what the student knows; (2) what the student can actually do with what he or she knows; (3) student confidence and motivation at the demonstration at the graduation stage.
- Courses are accepted by industry and certification agencies.

OUTCOME BASED EDUCATION FRAMEWORK 2

Key Data Sheet For Self Assessment Report (SAR) As Per Requirements Of The National Board Of Accreditation (University Grants Commission)

VI.	PROGRAM EDUCATIONAL OBJECTIVES
PEO1	Upgrade knowledge, learn new skills and kindle a holistic attitude in the student to meet the needs of food, fodder, fuel and fibre.
PEO2	Adopt appropriate technologies that will allow the farmer to take a rightful place in the digital economic order.
VII.	PROGRAM OUTCOMES
PO1	Student will employ appropriate technology for sustainable farming.
PO2	Align competencies to standards of Agriculture Skill Council of India (ASCI)
VIII.	COURSE OUTCOMES
CO1	Understand the different cosmic rhythms that influence the farm.
CO2	Interpret the Planting Calendar data and maintain detailed record of farm activities as per the Planting Calendar.
CO3	Use of Activity Based Learning (ABL) method to train farmers for this skill.

Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB SERIES Jaivik Krishi Paramparik Krishi Yojana
Krishi Panchang Parichay
04 42

KRISHI PLANTING CALENDAR 2019.

- The planting calendar provides data on various cosmic rhythms.
- Suitable farm activities can be planned well in advance.
- Each farm is an unique combination of local factors, farmer's abilities and market requirements. The data is made open-source.

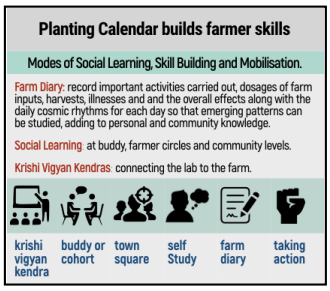
Krishi
Planting
Calendar
2019
JULY - SEPTEMBER
Open Source Information for Farmers To Plan Suitable Farm Activities.
This Calendar Uses Astronomical Data Provided by Dario Andrale and Edited by Ravi Kaushik for Bhaikaka Krishi Gurukul - Gujarat, Founded and Directed by Sarvdaman Patel.

Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB SERIES Jaivik Krishi Paramparik Krishi Yojana
Krishi Panchang Parichay
04 42

KRISHI PLANTING CALENDAR 2019.

- Traditional knowledge and customs must be integrated into a scientific method for the farmer to transform to a skilled artisan.
- Use of the calendar requires experimentation and reflection.
- Multi-modal social learning leads to skills mobilisation.


Planting Calendar builds farmer skills
Modes of Social Learning, Skill Building and Mobilisation.
Farm Diary: record important activities carried out, dosages of farm inputs, harvests, illnesses and and the overall effects along with the daily cosmic rhythms for each day so that emerging patterns can be studied, adding to personal and community knowledge.
Social Learning at buddy, farmer circles and community levels.
Krishi Vigyan Kendras connecting the lab to the farm.
krishi vigyan kendra
buddy or cohort
town square
self Study
farm diary
taking action

Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB SERIES Jaivik Krishi Paramparik Krishi Yojana
Krishi Panchang Parichay
05 42

TABLE OF CONTENTS.

- Cards are in placed in a sequence.
- Cards are colour coded as per learning activity.
- Facilitator may shuffle the deck and deal cards in new order.
- No time duration for any card has been specified.

Table of Contents 1

No.	CARD TITLE	TYPE	SYMBOL
01	SITABANI DEVI COMMUNITY COLLEGE	Divider	
02	JAIVIK KRISHI KOSHA	Syllabus	
03	COURSE BUMPER: OUTCOME BASED EDUCATION	Syllabus	
04	KRISHI PLANTING CALENDAR 2019	Divider	
05	TABLE OF CONTENTS	Syllabus	
06	GROUP WORK 1: CREATE YOUR LEARNING WALL	Group-Work	
07	RECEIVE YOUR LEARNING BOOK	Activity	
08	INTRODUCTION TO THE DECK BY TRAINER	Syllabus	
09	THE ACTIVITY BASED LEARNING (ABL) DECK	Divider	
10	6 BASIC RHYTHMS OF THE MOON	Learn	
11	PHASES OF MOON: 29.6 DAYS	Learn	
12	ASCENDING AND DESCENDING MOON: 27.2 DAYS	Learn	
13	LUNAR APOGEE AND PERIGEE: 27.5 DAYS	Learn	
14	LUNAR NODES (RAHU AND KETU)	Learn	
15	MOON IN OPPOSITION TO SATURN: 27.5 DAYS	Learn	
16	SCREEN: VIDEOS ON COSMIC RHYTHMS	Screen	
17	GLOSSARY - 1: MOON RHYTHMS	Glossary	
18	GROUP WORK 2: PREPARE LEARNING WALL	Group-Work	
19	SELF WORK- LEARNING BOOK NO. 1	Project-Work	
20	QUIZ 1	Quiz	

Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB SERIES Jaivik Krishi Paramparik Krishi Yojana
Krishi Panchang Parichay
05 42

TABLE OF CONTENTS.

- Students have to complete the previous card starting a new card.
- Students will complete the course at their own pace.
- You may receive your copy of the Deck as per course budget.

Table of Contents 2

No.	CARD TITLE	TYPE	SYMBOL
21	MOON IN CONSTELLATION 27.3 Days	Learn	
22	SUN IN CONSTELLATION: 365 DAYS	Learn	
23	SUITABLE FARMING ACTIVITIES	Learn	
24	SCREEN – ZODIAC, MOON AND SUN AND EARTH	Screen	
25	GLOSSARY 2: CONSTELLATIONS	Glossary	
26	SURVEY1: TRADITIONAL FARMING PRACTICES	Survey	
27	ACTIVITY: NIGHT SKY OBSERVATION	Activity	
28	GROUP WORK 3: PREPARE YOUR PRESENTATION	Group-Work	
29	SELF WORK: LEARNING BOOK NO 2	Project-Work	
30	QUIZ II:	Quiz	
31	TOWN SQUARE 1: OUR COSMOS	Town Square	
32	COMPREHENSIVE ASSESSMENT: MID COURSE	Quiz	
33	LIFE LONG LEARNING VALUES RUBERIC	Syllabus	
34	KEY TO PLANTING CALENDAR	Divider	
35	PLANTING CALENDAR FOR JULY 2019	Discover	
36	PLANTING CALENDAR AUGUST 2019	Discover	
37	PLANTING CALENDAR SEPTEMBER 2019	Discover	
38	CASE No 1: AMRITA INTEGRATED FARMS	Case	
39	PROJECT: PLAN YOUR FARM ACTIVITIES	Project-Work	
40	ASSESSED CAPSTONE PROJECT	Project-Work	
41	FINAL ASSESSMENT: COURSE GRADUATION	Quiz	
42	SUGGESTED COURSE DURATION		

Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB SERIES Jaivik Krishi Paramparik Krishi Yojana
Krishi Panchang Parichay
06 42

GROUP WORK 1: CREATE YOUR LEARNING WALL.

- The large group will create a learning wall at a designated place.
- The wall is a record of our learning journey with our own learning, questions, answers and any creative expressions we wish to share.
- One side has a blackboard and the other is for learning objects.

Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB SERIES Jaivik Krishi Paramparik Krishi Yojana
Krishi Panchang Parichay
06 42

GROUP WORK 1: CREATE YOUR LEARNING WALL.

- Spend time in making colourful charts and diagrams, and posters to create a group learning wall. Make use of the post-its and paper.
- Homework can also be put up for the class.
- Make it a practice to visit the wall often because it is alive.

KRISHI PANCHANG PARICHAY
TIMETABLE
PARTICIPANTS LIST
LEARNING WALL
Date
Q. What will we put up on our learning wall?
questions
answers
diagrams
This planet and everything else on it is an integral part of the solar system and the cosmos.
at the tonight bonfire after dinner!

Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB SERIES Jaivik Krishi Paramparik Krishi Yojana
Krishi Panchang Parichay
07 42

RECEIVE YOUR LEARNING BOOK.

- Your Learning Book is for you to create a record of your learning.
- The notebook provided is 2-books-in-one.
- The right side is to record data
- The left side is to record your understanding.

LEARNING BOOK : Interactive Student Notebook

Left Side Examples TO DEEPEN UNDERSTANDING AND CONCEPTUAL KNOWLEDGE	Right Side Examples BETTER INFORMATION CAPTURE
1. Review of lesson and question arising on the subject 2. A statement to show understanding of the subject 3. Creative expression of learning – diagram, sketch, infographic, poster 4. Explore and uncover personal relevance – *How does this connect to you?* 5. Interesting news from outside to support further learning.	1. Factual information from direct instruction, ABL Cards 2. Questions and Answers 3. Diagrams, charts, prepared or selected from source 4. Observation from Videos 5. Summary of Group Discussions 6. Assignment Homework
SUBJECTIVE	OBJECTIVE

Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB SERIES Jaivik Krishi Paramparik Krishi Yojana
Krishi Panchang Parichay
07 42

RECEIVE YOUR LEARNING BOOK.

- Use the right side to write and copy the matter on the cards.
- Save the right side for post class work.
- Use the art material provided to prepare the pages.
- This is your personal learning book - make it beautiful.

LEARNING BOOK : Assignment 1

Left Side	Right Side
Choose one or more to answer in your book. Each new page for the right side assignments will follow the same pattern. Use printouts, photos, cuttings	**There are 4 sections to your assignment marked as A to D. Use separate pages for each section.**
1. Questions arising on each topic 2. A statement to show your additional understanding of the topic 3. Creative expression, prepare diagram, sketch, infographic, poster 4. Explore and uncover personal relevance – How does this connect to you? 5. Interesting news from outside to support further learning.	A. Fill in the First few pages of the book with details required. B. Make a copy of the ABL Learning cards. Each card will require a separate page. C. Make a record of the YouTube videos seen in the assigned page with their simplified links. D. Summarise the Group Discussion points on a new page.

Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB SERIES Jaivik Krishi Paramparik Krishi Yojana
Krishi Panchang Parichay
08 42

INTRODUCTION TO THE DECK BY TRAINER.

- Trainer will layout the course outline, objectives and sequence.
- OBL evaluation for skill development for this course,
- Expected graduate outcomes.
- Use of ABL method, Learning Wall and the Learning Notebook.

Introduction to the Course and Deck

The trainer's introduction will cover the following points: Participants will sit in a circle with trainer.
1. A round of introduction of participants.
2. Introduce the course, its objectives and expected graduate outcomes.
3. Explain the ABL method, the learning wall and the learning book.
4. Lay out the deck in sections as per dividers and map out the intended learning journey with the time-table.
5. Questions and doubts will be answered.

NO.	OUTLINE OF TRAINER'S INTRODUCTION	Duration (HH:MM)
1	Trainer will give short bio.A round of introduction: name, place of work and residence, present occupation. (1 min per participant)	20:00
2	Introduce Sitabani Devi Community College. Its mission and network.	05:00
3	Course Introduction by trainer. It's place in Paramparik Krishi and an open-source knowledge.	05:00
4	Adult Education and ABL Method.	05:00
5	The use of the Learning Wall.	
6	The Learning Book and its right and left side sections.	05:00
7	Outcome based learning, graduate outcomes and skill development for livihood. Course Bumper.	10:00
8	Open House for questions	10:00

Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

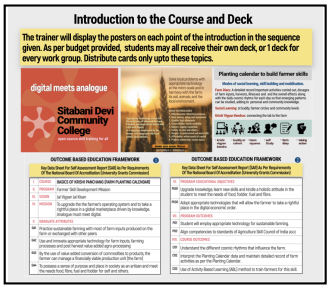
SUB SERIES Jaivik Krishi Paramparik Krishi Yojana
Krishi Panchang Parichay
08 42

INTRODUCTION TO THE DECK BY TRAINER.

- Display posters on the topics of and distribute the introductory card
- Participants will learn at 3 levels: self, small and large group.
- OBE: students must demonstrate their learning at all levels.
- Multi-modal learning increases learning.

Introduction to the Course and Deck

The trainer will display the posters on each point of the introduction in the sequence given. As per budget provided, students may all receive their own deck, or 1 deck for every work group. Distribute cards only upto these topics.

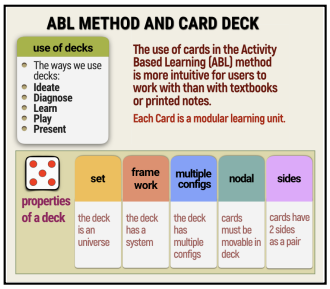

digital meets analogue
Sitabani Devi Community College
Planting calendar to build farmer skills
OUTCOME BASED EDUCATION FRAMEWORK
OUTCOME BASED EDUCATION FRAMEWORK

Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB Jaivik Krishi
SERIES Paramparik Krishi Yojana
Krishi Panchang Parichay
09 / 42

THE ACTIVITY BASED LEARNING (ABL) DECK.

- This Deck is a package of Activity Based cards (ABL).
- There are different learning activities that make learning a joy.
- Each card in the deck is an independent unit of learning.
- The learning is sequential, proceed as per the card number.

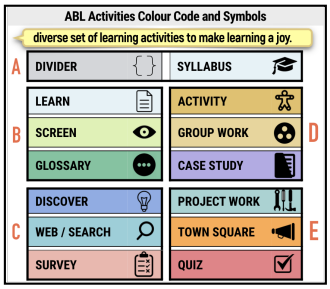

ABL METHOD AND CARD DECK
use of decks
The ways we use decks:
Ideate
Diagnose
Learn
Play
Present
The use of cards in the Activity Based Learning (ABL) method is more intuitive for users to work with than with textbooks or printed notes.
Each Card is a modular learning unit.
properties of a deck
set
frame work
multiple configs
nodal
sides
the deck is an universe
the deck has a system
the deck has multiple configs
cards must be movable in deck
cards have 2 sides as a pair

Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB Jaivik Krishi
SERIES Paramparik Krishi Yojana
Krishi Panchang Parichay
09 / 42

THE ACTIVITY BASED LEARNING (ABL) DECK.

- 12 diverse activities, each suitable for specific purpose.
- 4 groups of activities. 1 extra group for course structure.
- Activities correspond to the Bloom's Levels of Cognitive Learning
- Icon and colour assigned to each activity for easy recognition.

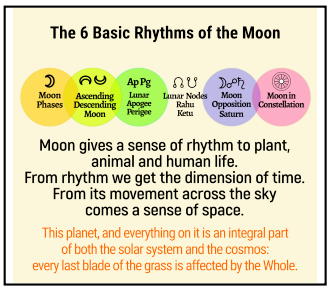


Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB Jaivik Krishi
SERIES Paramparik Krishi Yojana
Krishi Panchang Parichay
10 / 42

6 BASIC RHYTHMS OF THE MOON.

- A traditional farmer works with the 6 different Moon rhythms.
- These rhythms occur once every 27~29 days.
- The Planting Calendar shows the beneficial days for farming.
- The Calendar also warns of harmful days for farming.

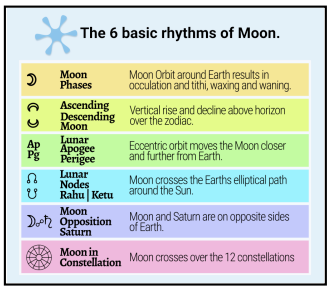

The 6 Basic Rhythms of the Moon
Moon Phases
Ascending Descending Moon
Ap Pg
Lunar Apogee Perigee
Lunar Nodes Rahu Ketu
Moon Opposition Saturn
Moon in Constellation
Moon gives a sense of rhythm to plant, animal and human life.
From rhythm we get the dimension of time.
From its movement across the sky comes a sense of space.
This planet, and everything on it is an integral part of both the solar system and the cosmos:
every last blade of the grass is affected by the Whole.

Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB Jaivik Krishi
SERIES Paramparik Krishi Yojana
Krishi Panchang Parichay
10 / 42

6 BASIC RHYTHMS OF THE MOON.

- The Moon called Soma influences the rasa dhātu;
- Its influence on plant life have been observed by the ancients.
- The influence is a configuration of these six rhythms on the farm.
- Experiencing these rhythms requires logic and intuition.

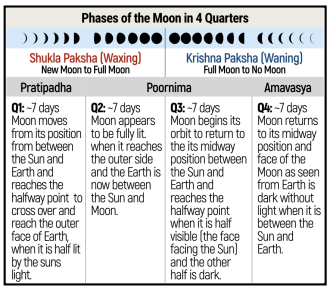

The 6 basic rhythms of Moon.
Moon Phases
Moon Orbit around Earth results in occulation and tithi, waxing and waning.
Ascending Descending Moon
Vertical rise and decline above horizon over the zodiac.
Ap Pg
Lunar Apogee Perigee
Eccentric orbit moves the Moon closer and further from Earth.
Lunar Nodes Rahu | Ketu
Moon crosses the Earths elliptical path around the Sun.
Moon Opposition Saturn
Moon and Saturn are on opposite sides of Earth.
Moon in Constellation
Moon crosses over the 12 constellations

Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB Jaivik Krishi
SERIES Paramparik Krishi Yojana
Krishi Panchang Parichay
11 / 42

PHASES OF MOON: 29.6 days.

- The Moon orbits around Earth.
- From between the Sun and Earth to the outer face of Earth.
- This is the cycle of Pratipada - Poornima - Amavasya.
- Moon is seen in different phases (tithi) as per its position.

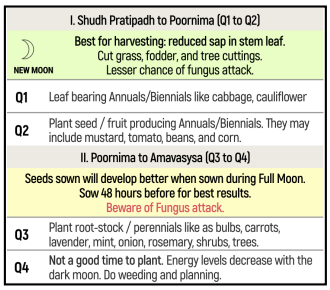

Phases of the Moon in 4 Quarters
Shukla Paksha (Waxing)
New Moon to Full Moon
Krishna Paksha (Waning)
Full Moon to No Moon
Pratipadha
Poornima
Amavasya
Q1: ~7 days Moon moves from its position from between the Sun and Earth and reaches the halfway point to cross over and reach the outer face of Earth, when it is half lit by the suns light.
Q2: ~7 days Moon appears to be fully lit, when it reaches the outer side and the Earth is now between the Sun and Moon.
Q3: ~7 days Moon begins its orbit to return to the its midway position between the Sun and Earth and reaches the halfway point when it is half visible (the face facing the Sun) and the other half is dark.
Q4: ~7 days Moon returns to its midway position and face of the Moon as seen from Earth is dark without light when it is between the Sun and Earth.

Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB Jaivik Krishi
SERIES Paramparik Krishi Yojana
Krishi Panchang Parichay
11 / 42

PHASES OF MOON: 29.6 days.

- Moon influences sap to move from the Root to Stem-Leaf zone.
- It reaches its peak (maximum) at Full Moon.
- The effect is stronger if led by rains, carrier of Moon forces.
- Effects of this Sap movement influences farm activities.

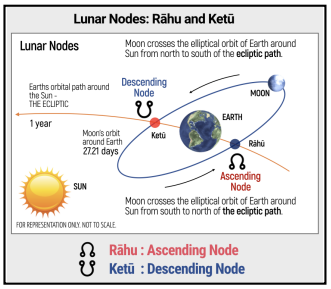

I. Shudh Pratipadh to Poornima (Q1 to Q2)
NEW MOON
Best for harvesting: reduced sap in stem leaf.
Cut grass, fodder, and tree cuttings.
Lesser chance of fungus attack.
Q1
Leaf bearing Annuals/Biennials like cabbage, cauliflower
Q2
Plant seed / fruit producing Annuals/Biennials. They may include mustard, tomato, beans, and corn.
II. Poornima to Amavasysa (Q3 to Q4)
Seeds sown will develop better when sown during Full Moon.
Sow 48 hours before for best results.
Beware of Fungus attack.
Q3
Plant root-stock / perennials like as bulbs, carrots, lavender, mint, onion, rosemary, shrubs, trees.
Q4
Not a good time to plant. Energy levels decrease with the dark moon. Do weeding and planning.

Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB SERIES Jaivik Krishi Paramparik Krishi Yojana
Krishi Panchang Parichay
14 / 42

LUNAR NODES (RĀHŪ AND KETŪ).

- Moon crosses the path of the Earth around Sun (the ECLIPTIC).
- The crossing points are called Nodes.
- At Ascending Node - Rāhū, Moon moves from south to north
- At Descending Node - Ketū it moves from north to south.


Lunar Nodes: Rāhu and Ketū
Lunar Nodes
Moon crosses the elliptical orbit of Earth around Sun from north to south of the ecliptic path.
Earths orbital path around the Sun - THE ECLIPTIC
Descending Node
MOON
1 year
EARTH
Ketū
Rāhū
Moon's orbit around Earth 27.21 days
Ascending Node
SUN
Moon crosses the elliptical orbit of Earth around Sun from south to north of the ecliptic path.
FOR REPRESENTATION ONLY. NOT TO SCALE.
Rāhu : Ascending Node
Ketū : Descending Node

Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB SERIES Jaivik Krishi Paramparik Krishi Yojana
Krishi Panchang Parichay
14 / 42

LUNAR NODES (RĀHŪ AND KETŪ).

- A lunar node occurs in about 14 days- two Nodes each month.
- Influence lasts for about 6 hours before and after the Nodes.
- Negative influences on plant life has been observed.
- Avoid any any work on these days.

LUNAR NODES
Ascending (Rāhū) and Descending (Ketū)

When the Moon crosses the Earth's orbital path it will negate the Sun's beneficial influence for this brief period. **This negative influence works itself into the soil when being freshly cultivated at the time of the nodes.**

Do not cultivate the soil, sow any seeds, transplant, prune trees or shrubs, nor do any other agricultural and horticultural work on the Node Day.

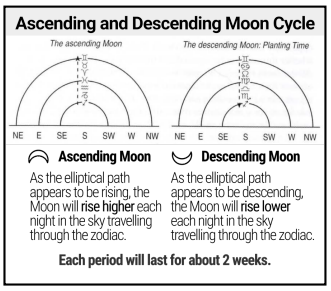
The influence of a lunar node is similar to that of an eclipse of the Sun by the Moon.

Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB SERIES Jaivik Krishi Paramparik Krishi Yojana
Krishi Panchang Parichay
12 / 42

ASCENDING AND DESCENDING MOON: 27.2 Days.

- Moon appears to be rising and setting in an elliptical path.
- The movement is from the East to the West.
- The Zodiacs appear on a vertical axis seen from Earth.
- Ascending and Descending periods are of about 2 weeks each.


Ascending and Descending Moon Cycle
The ascending Moon
The descending Moon: Planting Time
NE E SE S SW W NW
NE E SE S SW W NW
Ascending Moon
As the elliptical path appears to be rising, the Moon will rise higher each night in the sky travelling through the zodiac.
Descending Moon
As the elliptical path appears to be descending, the Moon will rise lower each night in the sky travelling through the zodiac.
Each period will last for about 2 weeks.

Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB SERIES Jaivik Krishi Paramparik Krishi Yojana
Krishi Panchang Parichay
12 / 42

ASCENDING AND DESCENDING MOON: 27.2 Days.

- The Earth is a living system with an inhaling - exhaling rhythm.
- The Ascending period has the character of Spring and Summer.
- The Descending period is like Autumn and Winter.
- Cycle mirrors the annual seasons and Sun's path in the sky.

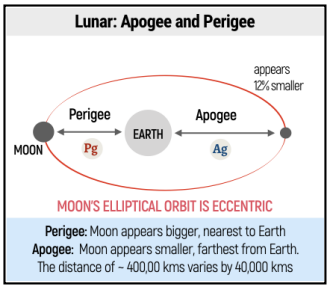
Ascending Moon	Descending Moon
Earth is breathing out. Cosmic energy fills the upper parts of the plant with vitality and strength. Fruits, flowers and leaves are juicy and vital.	Earth is breathing in. Cosmic energy fills the roots with vitality and strength. Beneficial to ground work. Vitality in roots. Juicy and tasty.
Spring & Summer conditions	Autumn & Winter conditions
Stem & Sap development 1. Harvest : Leaf and Fruit 2. Grafting 3. Fodder (full of vitality) 4. Sow seeds (✓germination)	**Root development** 1. Harvest : Root crop 2. Spread Compost, Plough 3. Transplant Saplings and small shoots

Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB SERIES Jaivik Krishi Paramparik Krishi Yojana
Krishi Panchang Parichay
13 / 42

LUNAR APOGEE AND PERIGEE: 27.5 DAYS.

- Moon has a eccentric elliptical orbit around Earth.
- It is nearest at to Earth at Perigee and farthest at Apogee.
- The distance of ~400,00 kms varies by ~40,000 kms.



Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB SERIES Jaivik Krishi Paramparik Krishi Yojana
Krishi Panchang Parichay
13 / 42

LUNAR APOGEE AND PERIGEE: 27.5 DAYS.

- Apogee and Perigee are stressful for plants life.
- Avoid seed sowing for atleast 12 hrs before and after the event.
- Fungal attack possible during Perigee.
- Potatoes are an exception.

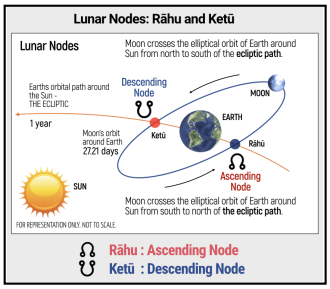
APOGEE	PERIGEE
Sowing on both these days produce weak plants. Apogee and Perigee events bring about a stress period for plant life. Seed sowing should be avoided 12 hours on either side of these times.	
Potatoes sown in Perigee are fewer but bigger in size.	✓ Exception: Potatoes do well when sown in Apogee, as there seems to be a multiplicity of the form (meaning more potatoes).
Plants prone to Fungal attack and insect growth at Perigee due to greater influence of moisture. (Moon's influence intensifies the water element). Effect magnified when occurs with Full Moon.	

Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB Jaivik Krishi
SERIES Paramparik Krishi Yojana
Krishi Panchang Parichay
14 / 42

LUNAR NODES (RĀHŪ AND KETŪ).

- Moon crosses the path of the Earth around Sun (the ECLIPTIC).
- The crossing points are called Nodes.
- At Ascending Node - Rāhū, Moon moves from south to north
- At Descending Node - Ketū it moves from north to south.

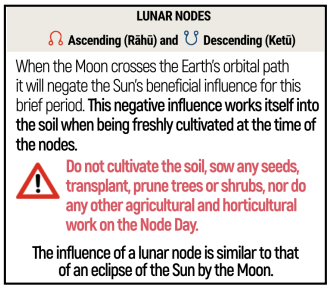

Lunar Nodes: Rāhu and Ketū
Lunar Nodes
Moon crosses the elliptical orbit of Earth around Sun from north to south of the ecliptic path.
Earths orbital path around the Sun - THE ECLIPTIC
Descending Node
MOON
EARTH
1 year
Moon's orbit around Earth 27.21 days
Ketū
Rāhū
SUN
Ascending Node
Moon crosses the elliptical orbit of Earth around Sun from south to north of the ecliptic path.
FOR REPRESENTATION ONLY. NOT TO SCALE.
Rāhu : Ascending Node
Ketū : Descending Node

Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB Jaivik Krishi
SERIES Paramparik Krishi Yojana
Krishi Panchang Parichay
14 / 42

LUNAR NODES (RĀHŪ AND KETŪ).

- A lunar node occurs in about 14 days- two Nodes each month.
- Influence lasts for about 6 hours before and after the Nodes.
- Negative influences on plant life has been observed.
- Avoid any any work on these days.

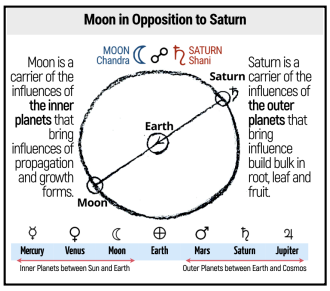

LUNAR NODES
Ascending (Rāhū) and Descending (Ketū)
When the Moon crosses the Earth's orbital path it will negate the Sun's beneficial influence for this brief period. This negative influence works itself into the soil when being freshly cultivated at the time of the nodes.
Do not cultivate the soil, sow any seeds, transplant, prune trees or shrubs, nor do any other agricultural and horticultural work on the Node Day.
The influence of a lunar node is similar to that of an eclipse of the Sun by the Moon.

Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB Jaivik Krishi
SERIES Paramparik Krishi Yojana
Krishi Panchang Parichay
15 / 42

MOON IN OPPOSITION TO SATURN: 27.5 days.

- Each month, Moon and Saturn come on opposite sides of Earth.
- Moon and Saturn forces inter-penetrate from opposite sides.
- Moon forces: Inner Planets. Between Sun and Earth.
- Saturn forces: Outer Planets.Beyond Earth.

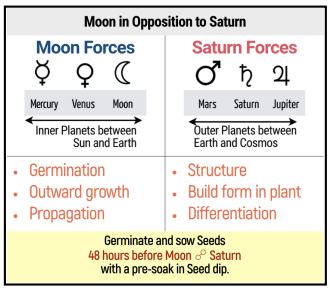

Moon in Opposition to Saturn
Moon is a carrier of the influences of the inner planets that bring influences of propagation and growth forms.
MOON Chandra
SATURN Shani
Saturn
Earth
Moon
Saturn is a carrier of the influences of the outer planets that bring influence build bulk in root, leaf and fruit.
Mercury Venus Moon Earth Mars Saturn Jupiter
Inner Planets between Sun and Earth
Outer Planets between Earth and Cosmos

Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB Jaivik Krishi
SERIES Paramparik Krishi Yojana
Krishi Panchang Parichay
15 / 42

MOON IN OPPOSITION TO SATURN: 27.5 days.

- Inner planets: germination, outward growth and propagation.
- Outer planets: structure, build form and differentiation.
- Moon and Saturn forces strengthen and balance each other.
- Seeds germinate well when sown on this day.



Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB Jaivik Krishi
SERIES Paramparik Krishi Yojana
Krishi Panchang Parichay
16 / 42

SCREEN: VIDEOS ON COSMIC RHYTHMS.

- The large group will watch several videos on Youtube.
- Afterwards, clarify your learnings and questions in small groups.
- Summarise your learning for the large group discussions.

YouTube

Course participants will watch several videos that explain the rotation of the Earth and Moon and how these cosmic events create the rhythms explained in the cards. Show each film twice to the group.

NO.	VIDEO ID	TITLE	DURATION (mm:ss)	URL
1	KPV-001	Earth, Moon, and Sun -An Orbit Refresher	03:37	http://bit.ly/KPV-001
2	KPV-002	Phases of the Moon	03:52	http://bit.ly/KPV-002
3	KPV-003	चाँद की कलाएं (Phases of Moon)	11:51	http://bit.ly/KPV-003
4	KPV-004	Gardening by the Moon	01.42	http://bit.ly/KPV-004

Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB Jaivik Krishi
SERIES Paramparik Krishi Yojana
Krishi Panchang Parichay
16 / 42

SCREEN: VIDEOS ON COSMIC RHYTHMS.

- After the screening, work with the questions in your group of 3 -4.
- On the sheets provided, write your questions.
- Then clarify your doubts from one another in the large group.
- Finally your trainer will recap the main points. Note them down.

Course participants will discuss and clarify doubts about the videos.

1. Divide the class into small groups of 3-4. Questions provided for discussion.
2. After that merge back into the class and each group will summarise their questions and how they have answered them amongst themselves. Open discussion in large group.
3. Trainer will clarify and audit the answers.
4. Trainer will recap the main points in the videos.

YouTube

NO.	QUESTIONS FOR SMALL GROUPS	DURATION (mm:ss)
1	Did we understand the position of the Moon, Earth and Sun ?	20:00
2	What would the Earth look like if we were on the Moon?	
3	Does the tilt of the rotational axis of the Earth affect the rhythms ?	
4	Summarise and prepare for large group discussion	
NO.	**QUESTIONS FOR LARGE GROUPS**	**DURATION (mm:ss)**
1	Unanswered questions or clarification from small groups	15:00
2	Recap by Trainer of the main points covered by the videos	15:00

Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB SERIES Jaivik Krishi Paramparik Krishi Yojana **Krishi Panchang Parichay** 17 42

GLOSSARY - 1: MOON RHYTHMS.

- Glossary Cards are a ready reference and a revision tool.
- Read each word and recollect its meaning.
- If word is forgotten, then look up your learning book
- Keep revising before each class.

Glossary : Moon Rhythms 1

MOON PHASE	ANNUALS	ASCENDING MOON
SHUKLA PAKSHA	BIENNALS	DESCENDING MOON
KRISHNA PAKSHA	PERENNIALS	ZODIAC
WAXING	ROOT	COSMIC ENERGY
WANING	LEAF	VITAL FORCE
PRATIPADH	FLOWER	SPRING
POORNIMA	FRUIT	SUMMER
AMAVASYA	SAP	AUTUMN
NEW MOON	STEM	WINTER
FULL MOON	FUNGUS	
NOW MOON		

Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB SERIES Jaivik Krishi Paramparik Krishi Yojana **Krishi Panchang Parichay** 17 42

GLOSSARY - 1: MOON RHYTHMS.

- You can google these words to learn more about them.
- Add your own words to the glossary.
- Translate words into your local language for future use.

Glossary : Moon Rhythms 2

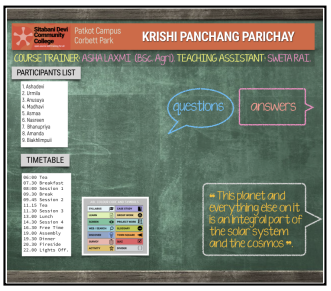
PERIGEE	INNER PLANETS	BUDHA
APOGEE	OUTER PLANETS	SHUKRA
ECCENTRIC	MOON FORCES	CHANDRA
LUNAR NODE	SATURN FORCES	PRITHVI
ASCENDING NODE	MERCURY	MANGAL
DESCENDING NOTE	VENUS	SHANI
RĀHŪ	MOON	BRIHASPATI
KETŪ	EARTH	ECLIPTICAL
SEED SOAK	MARS	ELLIPTICAL
GERMINATION	SATURN	
PROPOGATION	JUPITER	
DIFFERENTIATION		

Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB SERIES Jaivik Krishi Paramparik Krishi Yojana **Krishi Panchang Parichay** 18 42

GROUP WORK 2: PREPARE LEARNING WALL.

- Spend this session in adding new material to the learning wall.
- Work in small groups and choose a theme to work on.
- Any participant or staff can also put up their contribution.
- Extend the learning wall surface if space is falling short.

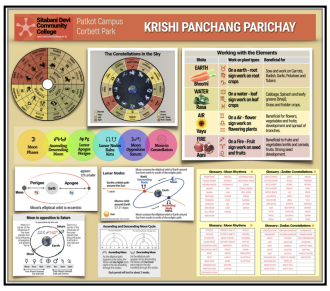

Sitabani Devi Community College
Patkot Campus
Corbett Park
KRISHI PANCHANG PARICHAY
COURSE TRAINER ASHA LAXMI (BSc. Agri) TEACHING ASSISTANT SWETA RAI
PARTICIPANTS LIST
TIMETABLE
questions
answers
"This planet and everything else on it is an integral part of the solar system and the cosmos"

Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB SERIES Jaivik Krishi Paramparik Krishi Yojana **Krishi Panchang Parichay** 18 42

GROUP WORK 2: PREPARE LEARNING WALL.

- Do a walk through of the Learning Wall. Make a note of themes.
- You can take photos of the wall for your reference.
- Do not remove any material after the course. It will be scanned.
- Additional learning material not covered in class, maybe put up.



Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB SERIES Jaivik Krishi Paramparik Krishi Yojana **Krishi Panchang Parichay** 19 42

SELF WORK- LEARNING BOOK NO. 1.

- Write in your learning notebook as per instructions.
- This is project work and what you will take back with you.
- It is your reference and a teaching aid to train others.
- Spend time and effort to fill your book. Don't copy, be inspired.

LEARNING BOOK : Interactive Student Notebook

Left Side Examples TO DEEPEN UNDERSTANDING AND CONCEPTUAL KNOWLEDGE	Right Side Examples BETTER INFORMATION CAPTURE
1. Review of lesson and question arising on the subject 2. A statement to show understanding of the subject 3. Creative expression of learning – diagram, sketch, infographic, poster 4. Explore and uncover personal relevance – *How does this connect to you?* 5. Interesting news from outside to support further learning.	1. Factual information from direct instruction, ABL Cards 2. Questions and Answers 3. Diagrams, charts, prepared or selected from source 4. Observation from Videos 5. Summary of Group Discussions 6. Assignment Homework
SUBJECTIVE	OBJECTIVE

Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB SERIES Jaivik Krishi Paramparik Krishi Yojana **Krishi Panchang Parichay** 19 42

SELF WORK- LEARNING BOOK NO. 1.

- The right and left sides of the learning book are like 2 notebooks.
- First attempt the right side and then then begin with the left.
- After completing the pair, move to the next topic.
- Right captures information and the left is your personal learning.

LEARNING BOOK : Assignment 1

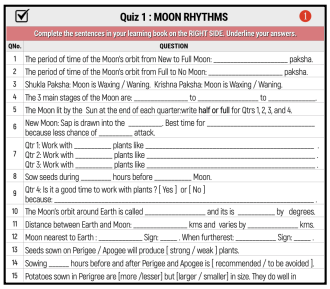
Left Side	Right Side
Choose one or more to answer in your book. Each new page for the right side assignments will follow the same pattern. Use printouts, photos, cuttings etc.	**There are 4 sections to your assignment marked as A to D. Use separate pages for each section.**
1. Questions arising on each topic 2. A statement to show your additional understanding of the topic 3. Creative expressionprepare diagram, sketch, infographic, poster 4. Explore and uncover personal relevance – How does this connect to you? 5. Interesting news from outside to support further learning.	A. Fill in the First few pages of the book with details required. B. Make a copy of the ABL Learning cards. Each card will require a separate page. C. Make a record of the YouTube videos seen in the assigned page with their simplified links. D. Summarise the Group Discussion points on a new page.

Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB SERIES Jaivik Krishi Parampark Krishi Yojana
Krishi Panchang Parichay 20 42

QUIZ 1.

- The Quiz is a self assessment of your learning.
- Provides a feedback to the Trainer about group level learning.
- A remedial route for revision or extra study time will be provided.
- The scores remain confidential. Study and prepare!



Quiz 1 : MOON RHYTHMS

Complete the sentences in your learning book on the RIGHT SIDE. Underline your answers.

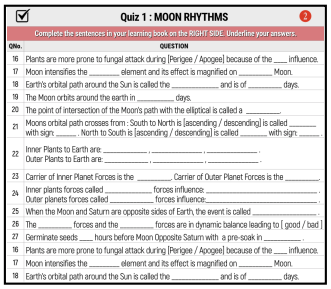
QNo.	QUESTION
1	The period of time of the Moon's orbit from New to Full Moon: _____ paksha.
2	The period of time of the Moon's orbit from Full to No Moon: _____ paksha.
3	Shukla Paksha: Moon is Waxing / Waning. Krishna Paksha: Moon is Waxing / Waning.
4	The 3 main stages of the Moon are _____ to _____ to _____
5	The Moon lit by the Sun at the end of each quarter:write **half or full** for Qtrs 1, 2, 3, and 4.
6	New Moon: Sap is drawn into the _____. Best time for _____ because less chance of _____ attack.
7	Qtr 1: Work with _____ plants like _____. Qtr 2: Work with _____ plants like _____. Qtr 3: Work with _____ plants like _____.
8	Sow seeds during _____ hours before _____ Moon.
9	Qtr 4: Is it a good time to work with plants ? [Yes] or [No] because _____
10	The Moon's orbit around Earth is called _____ and its is _____ by degrees.
11	Distance between Earth and Moon: _____ kms and varies by _____ kms.
12	Moon nearest to Earth : _____ Sign _____. When furthenest: _____ Sign: _____.
13	Seeds sown on Perigee / Apogee will produce [strong / weak] plants.
14	Sowing _____ hours before and after Perigee and Apogee is [recommended / to be avoided].
15	Potatoes sown in Perigree are [more /lesser] but [larger / smaller] in size. They do well in

Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB SERIES Jaivik Krishi Parampark Krishi Yojana
Krishi Panchang Parichay 20 42

QUIZ 1.

- Attempt the quiz in the given time.
- Write the answers in your learning book along with questions.
- Write on left side. Keep right side blank for remarks / corrections.
- Leave 1 page blank after the Quiz for remarks.



Quiz 1 : MOON RHYTHMS

Complete the sentences in your learning book on the RIGHT SIDE. Underline your answers.

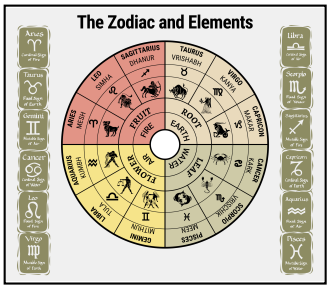
QNo.	QUESTION
16	Plants are more prone to fungal attack during [Perigee / Apogee] because of the ____ influence.
17	Moon intensifies the _____ element and its effect is magnified on _____ Moon.
18	Earth's orbital path around the Sun is called the _____ and is of _____ days.
19	The Moon orbits around the earth in _____ days.
20	The point of intersection of the Moon's path with the elliptical is called a _____.
21	Moons orbital path crosses from : South to North is [ascending / descending] is called _____ with sign: _____. North to South is [ascending / descending] is called _____ with sign: _____.
22	Inner Plants to Earth are: _____, _____, _____. Outer Plants to Earth are: _____, _____, _____.
23	Carrier of Inner Planet Forces is the _____. Carrier of Outer Planet Forces is the _____.
24	Inner plants forces called _____ forces influence: _____. Outer planets forces called _____ forces influence: _____.
25	When the Moon and Saturn are opposite sides of Earth, the event is called _____.
26	The _____ forces and the _____ forces are in dynamic balance leading to [good / bad].
27	Germinate seeds ____ hours before Moon Opposite Saturn with a pre-soak in _____.
16	Plants are more prone to fungal attack during [Perigee / Apogee] because of the ____ influence.
17	Moon intensifies the _____ element and its effect is magnified on _____ Moon.
18	Earth's orbital path around the Sun is called the _____ and is of _____ days.

Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB SERIES Jaivik Krishi Parampark Krishi Yojana
Krishi Panchang Parichay 21 42

MOON IN CONSTELLATION 27.3 Days.

- The Moon moves through the 12 constellations in about 28 days.
- The constellations are of unequal divisions.
- Moon stays in each constellation for about 1 1/2 to 3 1/2 days.
- The dominant element of the constellation is enhanced by Moon.



Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB SERIES Jaivik Krishi Parampark Krishi Yojana
Krishi Panchang Parichay 21 42

MOON IN CONSTELLATION 27.3 Days.

- Cosmic energy is attracted and activated into the soil and plants.
- Influence is beneficial when plant zone and constellation sync.
- The 4 elements are: Bhoomi, Rasa, Vayu and Agni.
- The 4 zones are: Root, Leaf, Flower and Fruit.

Moon and the Zodiac

Each of the 12 constellations has a dominant element (bhūta).
These affect the 4 main parts of the Plant: ROOT, LEAF, FLOWER AND FRUIT.
The influence gets enhanced in the period when the Moon is in that constellation.

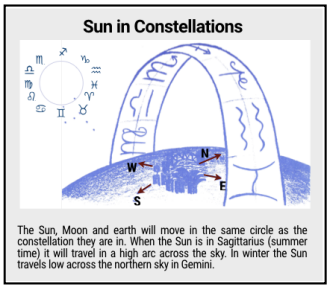
Element	Region	Sign	Sym.	Constellation	Zodiac
EARTH Bhoomi	Root	♍		Kanyā	Virgo
		♑		Makar	Capricorn
		♉		Vrishabh	Taurus
WATER Jal	Leaf	♋		Kark	Cancer
		♏		Vrischik	Scorpio
		♓		Meen	Pisces
AIR Vayu	Flower	♊		Mithun	Gemini
		♎		Tulā	Libra
		♒		Kumbh	Aquarius
FIRE Agni	Fruit	♐		Dhanur	Sagittarius
		♈		Mesh	Aries
		♌		Sinh	Leo

Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB SERIES Jaivik Krishi Parampark Krishi Yojana
Krishi Panchang Parichay 22 42

SUN IN CONSTELLATION: 365 DAYS.

- The Sun moves through the 12 constellations in about a year.
- Influence of the 'Sun-in-Constellation" will be the macro level.
- Influence of the 'Moon-in-Constellation' is the micro-level.



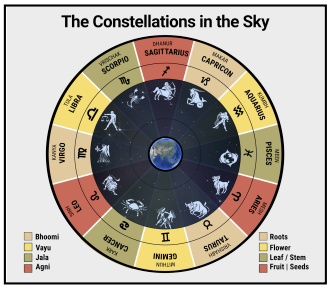
The Sun, Moon and earth will move in the same circle as the constellation they are in. When the Sun is in Sagittarius (summer time) it will travel in a high arc across the sky. In winter the Sun travels low across the northern sky in Gemini.

Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB SERIES Jaivik Krishi Parampark Krishi Yojana
Krishi Panchang Parichay 22 42

SUN IN CONSTELLATION: 365 DAYS.

- The Sun magnifies the influence of each of the zodiac sign.
- Dominant influences of either Earth, Water, Air or Fire element.
- Development in either the root, leaf, flower or fruit zone.
- The month will be known for the element that is dominated by.



Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB SERIES Jaivik Krishi Paramparik Krishi Yojana
Krishi Panchang Parichay
23 / 42

SUITABLE FARMING ACTIVITIES.

- The influences of the Moon and Sun when passing a zodiac.
- Plan suitable days to work and types of plant crops to work with.
- The 6 Moon and 1 Sun Rhythms happen concurrently.
- Each day is an unique combination.

Working with the Elements

Bhūta	Work on plant types	Beneficial for
EARTH Bhoomi	On a earth - root sign work on root crops	Sow and work on Carrots, Radish, Garlic, Potatoes and Tubers
WATER Rasa	On a water - leaf sign work on leaf crops	Cabbage, Spinach and leafy greens (bhaji); Grass and fodder crops.
AIR Vayu	On a Air - flower sign work on flowering plants	Beneficial for flowers, vegetables and fruits; development and spread of branches.
FIRE Agni	On a Fire - Fruit sign work on seed and fruits	Beneficial to fruits and vegetables lentils and cereals, fruits. Strong seed development.

Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB SERIES Jaivik Krishi Paramparik Krishi Yojana
Krishi Panchang Parichay
23 / 42

SUITABLE FARMING ACTIVITIES.

- Local conditions, resources, manpower and festivals are factors.
- The calendar helps to plan ahead with these factors.
- Planning and mobilising resources, leads to efficiency.

Summary of Suitable Farm Activities

Farm Activities	Celestial Event
Pruning - Fruit trees	Fire day, Full Moon + /or Desc Moon
Pruning - Flowering plants	Air day, Full Moon + /or Desc Moon
Tree cutting, harvesting, transplant saplings, prepare field, ploughing, compost work	Descending Moon
Sow seeds	Ascending Moon and Suitable Moon constellation (depending on crop type). 48 hours before Full Moon OR Moon opposition Saturn
Grafting	Ascending Moon
Harvesting	Moon in Air or Fire sign constellation. Do not do when : Full Moon or Moon in Water sign (prone to fungus).
Harvest : ROOT CROP	Descending Moon
Harvest : Others	Ascending Moon
Sow Potatoes	Apogee Ag
Fungus Control	Moon opposition Saturn

Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB SERIES Jaivik Krishi Paramparik Krishi Yojana
Krishi Panchang Parichay
24 / 42

SCREEN - ZODIAC, MOON AND SUN AND EARTH.

- Explore the relationship of the Zodiac Constellations and Earth.
- Influence of the Moon and Sun is explored in the videos listed.
- Many questions that remain will now be answered. The Celestial
- The Celestial sphere's influences on Earth affects plant life.

YouTube

Course participants will watch several videos that explain the rotation of the Earth and Moon and how these cosmic events create the rhythms explained in the cards. Show each film twice to the group.

NO.	VIDEO ID	TITLE	DURATION (mm:ss)	URL
1	KPV-001	Earth, Moon, and Sun -An Orbit Refresher	03:37	http://bit.ly/KPV-001
2	KPV-002	Phases of the Moon	03:52	http://bit.ly/KPV-002
3	KPV-003	चाँद की कलाएं (Phases of Moon)	11:51	http://bit.ly/KPV-003
4	KPV-004	Gardening by the Moon	01.42	http://bit.ly/KPV-004

Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB SERIES Jaivik Krishi Paramparik Krishi Yojana
Krishi Panchang Parichay
24 / 42

SCREEN - ZODIAC, MOON AND SUN AND EARTH.

- After the screening, work with the questions in your group of 3- 4.
- On the sheets provided, write your answers to the questions.
- Then clarify your doubts from one another in the large group.
- Finally your trainer will recap the main points. Note them down.

Course participants will discuss and clarify doubts about the videos.

1. Divide the class into small groups of 3-4 . Questions provided for discussion.
2. After that merge back into the class and each group will summarise their questions and how they have answered them amongst themselves. Open discussion in large group.
3. Trainer will clarify and audit the answers.
4. Trainer will recap the main points in the videos.

YouTube

NO.	QUESTIONS FOR SMALL GROUPS	DURATION (mm:ss)
1	Did we understand the position of the Moon, Earth and Sun ?	20:00
2	What would the Earth look like if we were on the Moon?	
3	Does the tilt of the rotational axis of the Earth affect the rhythms ?	
4	Summarise and prepare for large group discussion	
NO.	**QUESTIONS FOR LARGE GROUPS**	**DURATION (mm:ss)**
1	Unanswered questions or clarification from small groups	15:00
2	Recap by Trainer of the main points covered by the videos	15:00

Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB SERIES Jaivik Krishi Paramparik Krishi Yojana
Krishi Panchang Parichay
25 / 42

GLOSSARY 2: CONSTELLATIONS.

- The new words introduced will add to Glossary 1 card.
- Try to recall each word and its meaning.
- Recollect any image or symbol associated with the words.

Glossary : Zodiac Constellations 1

EARTH ELEMENT	ARIES	MESHA
WATER ELEMENT	TAURUS	VRISHABH
AIR ELEMENT	GEMINI	MITHUN
FIRE ELEMENT	CANCER	KARK
PRITHVI BHUTA	LEO	SIMHA
JALA BHUTA	VIRGO	KANYA
VAYU BHUTA	LIBRA	TULA
AGNI BHUTA	SCORPIO	VRISCHAK
JADA	SAGITTARIUS	DHANUR
PATTA	CAPRICON	MAKAR
PHOOL	AQUARIUS	KUMBH
PHALA	PISCES	MEEN

Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB SERIES Jaivik Krishi Paramparik Krishi Yojana
Krishi Panchang Parichay
25 / 42

GLOSSARY 2: CONSTELLATIONS.

- Use google search for better understanding of the words.
- Make notes in your Learning Book for the Glossary section.

Glossary : Zodiac Constellations 2

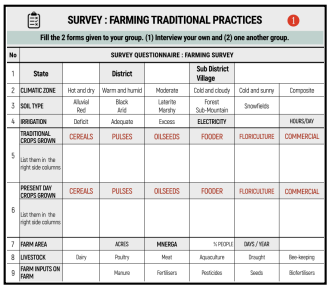
CONSTELLATIONS	NORTHERN HEMISPHERE	GERMINATION
NAKSHATRAS	SOUTHERN HEMISPHERE	TRANSPLANTING
NORTH	LATITUDE	FIELD PREPARATION
EAST	LONGITUDE	PLOUGHING
WEST	DEGREES	COMPOST WORK
SOUTH	EQUATOR	GRAFTING
WEST	SOLSTICE	FUNGUS CONTROL
NORTHERN SKY	TROPIC OF CANCER	HARVESTING
SOUTHERN SKY	TROPIC OF	
MACRO EFFECT	NORTH POLE	
MICRO EFFECT	SOUTH POLE	

Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB SERIES Jaivik Krishi Paramparik Krishi Yojana
Krishi Panchang Parichay
26 / 42

SURVEY1: TRADITIONAL FARMING PRACTICES.

- Break up into groups of 3-4 working in the same area.
- Groups will interview each other and fill the survey form.
- Find out about the traditional farming practices and crops.
- Report on your own group and 1 other group interviewed.



SURVEY : FARMING TRADITIONAL PRACTICES 1

Fill the 2 forms given to your group. (1) Interview your own and (2) one another group.

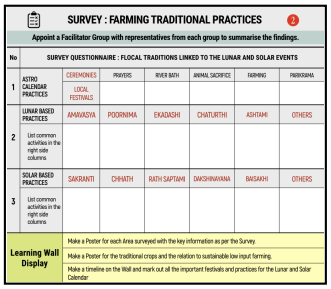
No	SURVEY QUESTIONNAIRE : FARMING SURVEY						
1	State		District		Sub District Village		
2	CLIMATIC ZONE	Hot and dry	Warm and humid	Moderate	Cold and cloudy	Cold and sunny	Composite
3	SOIL TYPE	Alluvial Red	Black Arid	Laterite Marshy	Forest Sub-Mountain	Snowfields	
4	IRRIGATION	Deficit	Adequate	Excess	ELECTRICITY		HOURS/DAY
5	TRADITIONAL CROPS GROWN List them in the right side columns	CEREALS	PULSES	OILSEEDS	FODDER	FLORICULTURE	COMMERCIAL
6	PRESENT DAY CROPS GROWN List them in the right side columns	CEREALS	PULSES	OILSEEDS	FODDER	FLORICULTURE	COMMERCIAL
7	FARM AREA		ACRES	MNERGA	% PEOPLE	DAYS / YEAR	
8	LIVESTOCK	Dairy	Poultry	Meat	Aquaculture	Drought	Bee-keeping
9	FARM INPUTS ON FARM		Manure	Fertilisers	Pesticides	Seeds	Biofertilisers

Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB SERIES Jaivik Krishi Paramparik Krishi Yojana
Krishi Panchang Parichay
26 / 42

SURVEY1: TRADITIONAL FARMING PRACTICES.

- Appoint a facilitator group (F.G.) to combine all the reports.
- F.G. will make comparative charts for the Learning Wall.
- Discover how communities work with cosmic rhythms.
- Analyse local environments and their relation to traditions.



SURVEY : FARMING TRADITIONAL PRACTICES 2

Appoint a Facilitator Group with representatives from each group to summarise the findings.

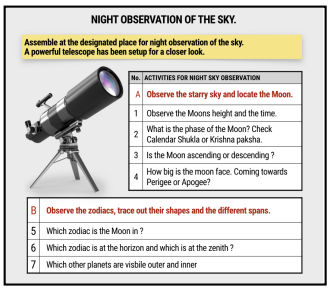
No	SURVEY QUESTIONNAIRE : FLOCAL TRADITIONS LINKED TO THE LUNAR AND SOLAR EVENTS						
1	ASTRO CALENDAR PRACTICES	CEREMONIES LOCAL FESTIVALS	PRAYERS	RIVER BATH	ANIMAL SACRIFICE	FARMING	PARIKRAMA
2	LUNAR BASED PRACTICES List common activities in the right side columns	AMAVASYA	POORNIMA	EKADASHI	CHATURTHI	ASHTAMI	OTHERS
3	SOLAR BASED PRACTICES List common activities in the right side columns	SAKRANTI	CHHATH	RATH SAPTAMI	DAKSHINAYANA	BAISAKHI	OTHERS
Learning Wall Display	Make a Poster for each Area surveyed with the key information as per the Survey.						
	Make a Poster for the traditional crops and the relation to sustainable low input farming.						
	Make a timeline on the Wall and mark out all the important festivals and practices for the Lunar and Solar Calendar.						

Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB SERIES Jaivik Krishi Paramparik Krishi Yojana
Krishi Panchang Parichay
27 / 42

ACTIVITY: NIGHT SKY OBSERVATION.

- View the actual night sky through a powerful telescope.
- Connect Moon Rhythms with the actual Moon present in the sky.
- Try to trace out the shapes of the Zodiacs with their signs.



NIGHT OBSERVATION OF THE SKY.

Assemble at the designated place for night observation of the sky.
A powerful telescope has been setup for a closer look.

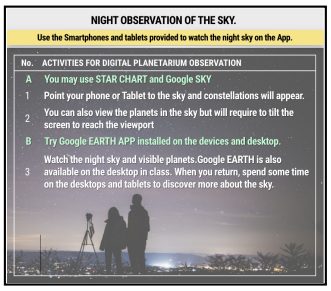
No.	ACTIVITIES FOR NIGHT SKY OBSERVATION
A	Observe the starry sky and locate the Moon.
1	Observe the Moons height and the time.
2	What is the phase of the Moon? Check Calendar Shukla or Krishna paksha.
3	Is the Moon ascending or descending ?
4	How big is the moon face. Coming towards Perigee or Apogee?
B	Observe the zodiacs, trace out their shapes and the different spans.
5	Which zodiac is the Moon in ?
6	Which zodiac is at the horizon and which is at the zenith ?
7	Which other planets are visible outer and inner

Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB SERIES Jaivik Krishi Paramparik Krishi Yojana
Krishi Panchang Parichay
27 / 42

ACTIVITY: NIGHT SKY OBSERVATION.

- Look at the sky with digital planetariums available on given apps.
- Confirm the seen reality with the digital mapping.
- A big picture arises as you connect the small dots.
- Reflect on the vastness of the cosmos and its influence on Earth.



NIGHT OBSERVATION OF THE SKY.

Use the Smartphones and tablets provided to watch the night sky on the App.

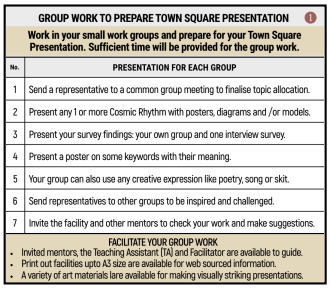
No.	ACTIVITIES FOR DIGITAL PLANETARIUM OBSERVATION
A	You may use STAR CHART and Google SKY
1	Point your phone or Tablet to the sky and constellations will appear.
2	You can also view the planets in the sky but will require to tilt the screen to reach the viewport
B	Try Google EARTH APP installed on the devices and desktop.
3	Watch the night sky and visible planets.Google EARTH is also available on the desktop in class. When you return, spend some time on the desktops and tablets to discover more about the sky.

Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB SERIES Jaivik Krishi Paramparik Krishi Yojana
Krishi Panchang Parichay
28 / 42

GROUP WORK 3: PREPARE YOUR PRESENTATION.

- In your small groups, prepare for the Town Square event.
- Prepare posters, drawings and other large displays.
- Showcase your understanding of the work
- Analysis and research beyond classwork will enhance your work.



GROUP WORK TO PREPARE TOWN SQUARE PRESENTATION 1

Work in your small work groups and prepare for your Town Square Presentation. Sufficient time will be provided for the group work.

No.	PRESENTATION FOR EACH GROUP
1	Send a representative to a common group meeting to finalise topic allocation.
2	Present any 1 or more Cosmic Rhythm with posters, diagrams and /or models.
3	Present your survey findings: your own group and one interview survey.
4	Present a poster on some keywords with their meaning.
5	Your group can also use any creative expression like poetry, song or skit.
6	Send representatives to other groups to be inspired and challenged.
7	Invite the facility and other mentors to check your work and make suggestions.

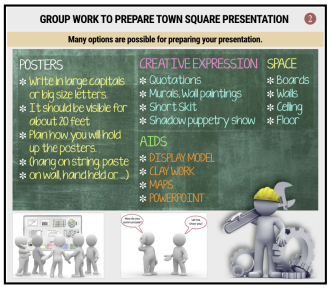
FACILITATE YOUR GROUP WORK
- Invited mentors, the Teaching Assistant (TA) and Facilitator are available to guide.
- Print out facilities upto A3 size are available for web sourced information.
- A variety of art materials lare available for making visually striking presentations.

Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB SERIES Jaivik Krishi Paramparik Krishi Yojana
Krishi Panchang Parichay
28 / 42

GROUP WORK 3: PREPARE YOUR PRESENTATION.

- Posters: For large display, readable text points.
- Creative Expression: to lift your presentation to the next level.
- Aids: models, maps and powerpoint projections.
- Space: boards, walls, ceiling and the floor.



GROUP WORK TO PREPARE TOWN SQUARE PRESENTATION 2

Many options are possible for preparing your presentation.

POSTERS
* Write in large capitals or big size letters.
* It should be visible for about 20 feet
* Plan how you will hold up the posters.
* (hang on string, paste on wall, hand held or ...)

CREATIVE EXPRESSION
* Quotations
* Murals, Wall paintings
* Short Skit
* Shadow puppetry show

AIDS
* DISPLAY MODEL
* CLAY WORK
* MAPS
* POWERPOINT

SPACE
* Boards
* Walls
* Ceiling
* Floor

Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB SERIES Jaivik Krishi Paramparik Krishi Yojana
Krishi Panchang Parichay
29 / 42

SELF WORK: LEARNING BOOK NO 2.

- Prepare your learning book as per the instructions.
- Keep sufficient pages for TOC. Number the pages .
- Complete the section on the 6 Moon rhythms.
- You may use more than a page for each rhythm.

LEARNING BOOK : Assignment 2

- Fill your personal details on the first page.
- Fill the table of contents after completing the other pages.
- Each left page and right page are a pair. If the text on either side exceeds a page, leave the partner page (right or left) blank. Begin each topic on a separate blank page pair.

No.	TOPIC	RIGHT SIDE: Capture Information and Data
1	6 BASIC RHYTHMS OF THE MOON	FOR EACH TOPIC **Use of any language is permitted.**
2	PHASES OF THE MOON	1. Write the title of the topic on the top. 2. Draw the diagrams / graphics as per its ABL Card. 3. Make a box for the symbols used. 4. Write a description of the Moon rhythm as described in your own words. Some words can be written in your own language script to get the correct pronunciation. 5. Use compass set, rule and colours as provided to make the diagrams accurate. 6. If any other information is available to you, make a note of it. Even shared by other participants.
3	ASCENDING AND DESCENDING MOON	
4	LUNAR APOGEE AND PERIGEE	
5	LUNAR NODES (RÄHÜ and KETÜ)	
6	MOON IN OPPOSITION TO SATURN	

Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB SERIES Jaivik Krishi Paramparik Krishi Yojana
Krishi Panchang Parichay
29 / 42

SELF WORK: LEARNING BOOK NO 2.

- The left side is to document your understanding of the topic.
- Explore further the topic using reference material or the web.
- Link the right side information with your personal context.
- Make bullet points for what you want to explore further later.

LEARNING BOOK : Assignment 1

- For each pair, do the right side first and then the left.
- Do your own research, discuss with others and then fill the left side.
- Note down links, books and other information for further study.

LEFT SIDE: Deepen understanding and concepts	No.	TOPIC
FOR EACH TOPIC **Use of any language is permitted.** **Attempt as many as you want.** 1. Review of lesson and questions arising on the topic 2. A statement to show understanding of the topic 3. Your own diagram, sketch, infographic 4. Traditions that community follow and make sense now by linking to the cosmic phenomena 5. Explore and uncover personal relevance - **How does this connect to me?** 6. Interesting news from outside to support further learning. Links that you will explore later.	1	6 BASIC RHYTHMS OF THE MOON
	2	PHASES OF THE MOON
	3	ASCENDING AND DESCENDING MOON
	4	LUNAR APOGEE AND PERIGEE
	5	LUNAR NODES (RAHU and KETU)
	6	MOON IN OPPOSITION TO SATURN

Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB SERIES Jaivik Krishi Paramparik Krishi Yojana
Krishi Panchang Parichay
30 / 42

QUIZ II: .

- This Quiz is a self assessment of the topics covered till now and
- You are required to progressively study of all the topics covered.
- The quiz contains both objective and multiple choice questions.

Quiz 2 : ZODIAC AND CONSTELLATIONS 1

Complete the sentences in your learning book on the RIGHT SIDE. Underline your answers.

No.	QUESTION
1	Name the English and Indian names for the 12 zodiac constellations with their symbols.
2	Group the zodiacs as per the Elements: Earth, Water, Air and Fire.
3	What are the influence of each element on plants and farming?
4	The Moon's position in each Zodiac sign is [fixed / variable] because: _____ .
5	The Sun takes _____days[s] to move through all the Zodiacs.
6	The Sun takes _____ year[s] to move through all the Zodiacs.
7	The influence of the Zodiacs due to Moon's position is [micro / macro] for an any day.
8	The influence of the Zodiacs due to Sun's position is [micro / macro] for any month.
9	In the Norther hemisphere, the highest Zodiac is _____ The lowest in the circle is _____ .

Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB SERIES Jaivik Krishi Paramparik Krishi Yojana
Krishi Panchang Parichay
30 / 42

QUIZ II: .

- Attempt the Quiz in the given time.
- Write the answers with the questions in your learning book.
- If you require more time than given, take permission from trainer.

Quiz 2 : ZODIAC AND CONSTELLATIONS 2

Complete the sentences in your learning book on the RIGHT SIDE. Underline your answers.

No.	QUESTION
1	When Moon is in Taurus, Virgo or Capricorn, work on [root / leaf / flower / fruit] crops.
2	When Moon is in Cancer, Scorpio or Pisces, work on [root / leaf / flower / fruit] crops.
3	When Moon is in Gemini, Libra or Aquarius, work on [root / leaf / flower / fruit] crops.
4	When Moon is in Aries, Leo or Sagittarius, work on [root / leaf / flower / fruit] crops.
5	When to prune fruit trees?
6	When to prune flowering plants?
7	Harvesting: Moon in _____ element sign. Not ion [Full / No Moon].
8	Not to harvest when Moon in _____ element sign because of _____ possibility.
9	Harvesting: ROOT Crops [Asc / Dsc] Moon and others on [Asc / Dsc] Moon.
10	When to sow Potatoes?
11	Carry out fungus control on Moon _____ Saturn.
12	Activities on Descending Moon:
13	Activities on Descending Moon:
14	Best time to sow seeds:

Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB SERIES Jaivik Krishi Paramparik Krishi Yojana
Krishi Panchang Parichay
31 / 42

TOWNSQUARE 1: OUR COSMOS.

- Town Square is a large group event. Presentations will be made.
- Learn from one another to create a big picture.
- Faculty, officials, sponsors and community can be the audience.
- Set your own time limits as per time available.

TOWN SQUARE EVENT 1

Everyone is invited to this large group event. We learn from one another.

No.	ACTIVITIES FOR TOWN SQUARE EVENT
1	Participants will sit in their work groups around to the learning wall.
2	The Facilitator will introduce the event, any special guests and invitees will be introduced. Then hand over the event to the Moderator.
3	Moderator will ask various groups to introduce their group name and members. Time-limits for presentations will be set. Maintain an informal atmosphere but without losing focus that this is a learning and evaluation event.
4	Each group makes their presentation, presents their findings and answers questions by the audience.
5	Make use of the stage or podium space to make the presentations.
6	Use posters, drawings, models and verbal presentations.
7	After completing your presentation, place the learning objects on or near the learning wall. Use a rope and clothes pegs to hang the posters and displays across the learning space.
8	By special permission of the moderator and facilitator before hand, senior students or faculty can also make a short presentation.

Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB SERIES Jaivik Krishi Paramparik Krishi Yojana
Krishi Panchang Parichay
31 / 42

TOWNSQUARE 1: OUR COSMOS.

- Multimedia presentations as per the given outline.
- Assemble the work on the learning wall.
- Event moderator: sequence events. Timekeeper: manage time.
- There are no evaluations nor marks given.

TOWN SQUARE EVENT 2

Divide the topics before the event and a group may present more than one topic.

No.	ACTIVITIES FOR TOWN SQUARE EVENT
1	The Orbits of the Moon and Sun and Earth in the Celestial Sphere
2	5 Moon Rhythms
3	The Elements of Earth, Jal, Agni and Vayu and relation to plant life
4	The Zodiac and their relation to the Elements.
5	Outer and Inner Planets
6	Survey findings from al groups
7	Traditional practices linked to the Astro Calendar discovered.
8	Special presentations by participants, faculty.
9	Guest presentation by invited specialist
10	Walk through of the Learning Wall
11	Display of the posters and other displays
12	Display of the Learning Books
13	Quiz display
14	Feedback and Review by invited faculty

Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB Jaivik Krishi
SERIES Paramparik Krishi Yojana
Krishi Panchang Parichay
32 / 42

COMPREHENSIVE ASSESSMENT: MID COURSE.

- Comprehensive and Continuous Assessment (CCE).
- Core focus of Outcome Based Education (OBE) Certification.
- Assess learning outcomes and make mid course adjustments.
- Students take responsibility for their learning and of their peers.

MID COURSE ASSESSMENT 1

Students need to take responsibility of assessing their own work, their peers' work and helping each other learn.

Comprehensive and Continous Assessment (CCE) Process is an core process for Outcome Based Education.

Purpose	Comprehensive	Formative Assessment	Summative Assessment
Determine students' strengths and learning gaps in the concerned subjects to fine tune the methods and improve learning process.	Comprehensive component means getting a holistic sense of student's progress. It covers the cogntive, affective and the pschyo-motor skills.	Designed to monitor and improve students' progress during the learning process. All evidence of learning is data.	Assess what Students have learnt as per expected based on lesson's objectives and learning points.

Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB Jaivik Krishi
SERIES Paramparik Krishi Yojana
Krishi Panchang Parichay
32 / 42

COMPREHENSIVE ASSESSMENT: MID COURSE.

- The Grade Book is drawn from a basket of weighted activities.
- Students are constantly monitored for the various activities.
- Assessed for the contribution they make towards group learning.
- The Teaching Assistant (TA) plays a key role in assessment.

MID COURSE ASSESSMENT 2

Grade Book is assessed from a diverse basket of sources with a weightage.

Components of Your Gradebook

No	Category	Wt.%	Description
1	Test	10	Objective Type Quiz.
2	Group Work	10	Specific task oriented work in groups.
3	Student Journal	30	In format task for each lesson.
4	Participation	10	Classroom participation, Contribution to learning wall.
5	Exam Capstone	20	Final Exam Capstone Asset creation
6	Attendance	10	Regular class attendance
7	Assessment	10	As per life long learning values rubric.
	TOTAL	100	

The Teaching Assistant (TA) is constantly monitoring and recording the class participation and attendance for all students. Also after each day, the Facilitator and TA review the class and the learning work of students. After Final Assessment the grade book will be handed over to the student and the sponsor.

Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB Jaivik Krishi
SERIES Paramparik Krishi Yojana
Krishi Panchang Parichay
33 / 42

LIFE LONG LEARNING VALUES RUBERIC.

- Adult Learners bring their life experience to the class.
- Adults must remain engaged in a process of life long learning.
- Periodically upgrade their skills to remain viable workers.
- The assessment is based on 5 criteria x 4 grades.

LIFE LONG LEARNING VALUES RUBERIC FOR GRADING STUDENTS 1

CRITERIA	(%)	Exceeds Expectation 81 100 % Lower Range:81	Meets Expectation 61 80 % Lower Range:61	Below Expectation 40 60 % Lower Range:40	Fail Grade 0 40% Lower Range:0
TOPIC SELECTION	10	Explores a topic in depth, yielding a rich awareness and/ or little-known information indicating intense interest in the subject.	Explores a topic in depth, yielding insight and/ or information indicating interest in the subject.	Explores a topic with some evidence of depth, providing occasional insight and/ or information indicating mild interest in the subject.	Explores a topic at a surface level, providing little insight and/ or information beyond the very basic facts indicating low interest in the subject.
EXISTING KNOWLEDGE RESEARCH AND OR VIEWS	10	Identifies a creative, focused, and manageable topic that addresses potentially significant yet previously less explored aspects of the topic.	Identifies a focused and manageable/ doable topic that appropriately addresses relevant aspects of the topic.	Identifies a topic that while manageable/ doable, is too narrowly focused and leaves out relevant aspects of the topic.	Identifies a topic that is far too general and wide ranging as to be manageable and doable.
DESIGN PROCESS	25	All elements of the methodology or theoretical framework are skillfully developed. Appropriate methodology or theoretical frameworks may be synthesised from across disciplines / from relevant sub-disciplines.	Critical elements of the methodology or theoretical framework are appropriately developed, however, more subtle elements are ignored or unaccounted for.	Critical elements of the methodology or theoretical framework are missing, incorrectly developed, or unfocused.	Inquiry design demonstrates a misunderstanding of the methodology or theoretical framework.

Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB Jaivik Krishi
SERIES Paramparik Krishi Yojana
Krishi Panchang Parichay
33 / 42

LIFE LONG LEARNING VALUES RUBERIC.

- The process is transparent and open to review if required.
- Guides faculty and assessors to objectively assess the student.
- It also enables the student to self- assess their performance.
- Use as a template for the key indicators.

LIFE LONG LEARNING VALUES RUBERIC FOR GRADING STUDENTS 2

Criteria	(%)	Exceeds Expectation 81 100 % Lower Range:81	Meets Expectation 61 80 % Lower Range:61	Below Expectation 40 60 % Lower Range:40	Fail Grade 0 40% Lower Range:0
ANALYSIS	25	Organises and synthesises evidence to reveal insightful patterns, differences, or similarities related to focus.	Organises evidence to reveal important patterns, differences, or similarities related to focus.	Organises evidence , but the organisation is not effective in revealing important patterns, differences, or similarities.	Lists evidence, but it is not organised and/ or is unrelated to focus.
CONCLUSIONS	20	States a conclusion that is a logical extrapolation from the inquiry findings.	States a conclusion focused solely on the inquiry findings. The conclusion arises specifically from and responds specifically to the inquiry findings.	States a general conclusion that, because it is so general, also applies beyond the scope of the inquiry findings.	States an ambiguous, illogical or unsupportable conclusion from inquiry findings.

The Ruberic is an evaluation criterion that is transparent and fair to the student and guides the faculty to be objective. Divided into 4 zones, the mark is given as a grade. A precise numerical evaluation cannot be applied to a holistic assessment process.

For Adult skill training, the student is considered to be a life long learner who is credited for previous life work experience. The ruberic developed by a panel of international specialists looks for specific traits that define a life long adult learner.

Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB Jaivik Krishi
SERIES Paramparik Krishi Yojana
Krishi Panchang Parichay
34 / 42

KEY TO PLANTING CALENDAR.

- The cosmic rhythms have assigned symbols to read the charts.
- Learn these symbols and write them in your Learning Book.
- Revise the 6 Moon rhythms to read the Calendar.

Symbol Key to the Calendar

Symbol	Name	Description
●	New Moon	Ekadashi, First day after Amavasya
○	Full Moon	Poornima
∩	Ascending Moon	Moon's arc rises each day over the horizon
∪	Descending Moon	Moon's arc falls each day over the horizon
☊	Ascending Node: Rahu	Moon cuts the Earths orbit ascending in orbit
☋	Descending Node: Ketu	Moon cuts the Earths orbit descending in orbit
Pg	Perigee	Moon is nearest to the Earth in its orbit
Ag	Apogee	Moon is fatherest to the Earth in its orbit
☽☍♇	Moon Opposition Saturn	Moon and Saturn are on either side of Earth

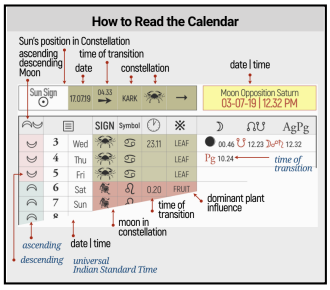
Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB Jaivik Krishi
SERIES Paramparik Krishi Yojana
Krishi Panchang Parichay
34 / 42

KEY TO PLANTING CALENDAR.

- The calendar is divided into Shukla paksha and Krishna paksha.
- Look at each rhythm and its relation to others.
- Time of transitions are given for Indian Standard Time.
- You can note down important festival dates.

How to Read the Calendar



Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB SERIES Jaivik Krishi Paramparik Krishi Yojana
Krishi Panchang Parichay 37 42

PLANTING CALENDAR SEPTEMBER 2019.

- Indian Month: Bhadrapada. Season: Varsha
- Moon is in Shuklapaksh (Waxing)
- 02. 09.19: Ganesh Chaturthi

Sun Sign → SIMHA → Moon Opposition Saturn

			SIGN	Symbol		※	☽ ☊☋ AgPg
30	Fri					FRUIT	● 16.07 Pg 21.27
31	Sat				19.24	ROOT	
1	Sun					ROOT	
2	Mon				19.26	FLOWER	
3	Tue					FLOWER	
4	Wed				22.16	LEAF	
5	Thu					LEAF	
6	Fri					LEAF	
7	Sat				4.59	FRUIT	
8	Sun					FRUIT	☊ 23.05
9	Mon				15.14	ROOT	
10	Tue					ROOT	
11	Wed					ROOT	
12	Thu				3.30	FLOWER	
13	Fri					FLOWER	Ag 19.02

Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB SERIES Jaivik Krishi Paramparik Krishi Yojana
Krishi Panchang Parichay 37 42

PLANTING CALENDAR SEPTEMBER 2019.

- Indian Month: Ashvina (15.9.19). Season is Varsha.
- Moon is in Krishnapaksh (Waning)
- 29.9.19: Navratri Begins

Sun Sign SIMHA 17.9.19 13.02 → KANYA Moon Opposition Saturn 23-09-19 | 1110 PM

			SIGN	Symbol		※	☽ ☊☋ AgPg
14	Sat				3.42	LEAF	○ 10.03
15	Sun					LEAF	
16	Mon					LEAF	Ag 16.20
17	Tues				4.24	FRUIT	
18	Wed					FRUIT	
19	Thu				15.13	ROOT	
20	Fri					ROOT	
21	Sat				23.41	FLOWER	
22	Sun					FLOWER	
23	Mon					FLOWER	☊ 12.00 ♃♆♇ 11.10 Equinox 13.19
24	Tues				4.51	LEAF	
25	Wed					LEAF	
26	Thu				6.42	FRUIT	
27	Fri					FRUIT	

Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB SERIES Jaivik Krishi Paramparik Krishi Yojana
Krishi Panchang Parichay 38 42

CASE No 1: AMRITA INTEGRATED FARMS.

The purpose of a Case Study is put the student in the role of a problem solver in a realistic scenario which will be encountered at the work place so that the student can generate logical and workable solutions.

CASE STUDY: AMRITA INTEGRATED FARM 1

Amrita Farms promotes natural farming and has an outer boundary of trees and plants after its wire fence and trench with the following plants:

Bamboo	The produce from Bamboo tress can be utilised in constructing house and cottages.
Vetiver Grass	Easily grown in shade of taller trees. Also helpful in checking soil erosion.
Moringa	Helpful in Nitrogen fixation in the soil and gives good marketable produce.
Mogra	Easily grown in shade and adds fragrance at the entrance.
Gliricidia	Leguminous tree, can be grown easily, keeps rats away and good supply of biomass. Has medicinal uses.
Ambadi	
Tulsi	Is a medicinal plant of great value.
Aloe Vera	Easily grown in shade, and medicinal values.
Papaya	Starts fruiting in 6 months and can be easily marketed.
Lemon Grass	Has good medicinal value and can be used in preparation of herbal tea at home.
Banana	Easily marketable fruit for any season.
Adrusi	Holds important medicinal values and termed as the first plant in Ayurveda.
Phudina	Cover the surface between the plants, grows well in shade. Food / medicinal value.
Dhencha	Good for Nitrogen fixation and gives good quality fodder for the cattle.
Jatropa	Oil seeds
Sweet Neem	Food and medicinal Value
Aswain	Food and medicinal Value
Desi Gulab	Market value and beautification.
Singapore Cherry Tree	shade to pathway and fruits.

Crops grown for self consumption and market surplus are:

Carrot	Palak	Cauliflower	Tomato	Brinjal	Chillies	Cabbage	Dhaniya	Methi
Radish	Potato	Wheat	Corn	Moong	Chana	Bajra	Green Peas	

Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB SERIES Jaivik Krishi Paramparik Krishi Yojana
Krishi Panchang Parichay 38 42

CASE No 1: AMRITA INTEGRATED FARMS.

- Amrita Farms is based a farm that has shared its cropping menu.
- The case provides no answers, there is no one correct answer.
- It allows the student to work through a decision making process.
- Interpretation of Planting Calendar data is key to the case.

CASE STUDY: AMRITA INTEGRATED FARM 2

Read the case study in detail and refer to the planting calendar for preparing a farm calendar. After analysis, answer the questions in a case study group setting.

No.	QUESTIONS
1	**LIVE OUTER FENCE:** find ideal time for carrying out sowing, maintenance, pruning, harvesting. Also issue advisory for no work days and fungal attacks.
2	**FARM CROPS:** find ideal time for carrying out sowing, maintenance, nutrient inputs. Also issue advisory for no work days and fungal attacks.
3	**BIOMASS:** Identify the species for creating biomass and give suitable dates for their sowing and cutting.
4	**COMPOSTING:** When to make compost heaps and for lay out in the fields.
5	**NUTRIENTS:** suitable dates for bio-fertilisers and on farm liquid manures.
6	**PEST CONTROL:** Suggest dates for application of natural insect repellents.
7	**FARM LABOUR HOLIDAY:** Suggest dates for giving farm labour holidays.

Planning a farm activity calendar is a holistic exercise that considers all the cosmic rhythms and the influence of the Moon (micro) and the Sun (Macro) on the Zodiac constellations. Data is important but so is reflective thinking. Compare your notes with other participants, listen attentively to the discussions and to the facilitators questions. Many alternative solutions are possible.

Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB SERIES Jaivik Krishi Paramparik Krishi Yojana
Krishi Panchang Parichay 40 42

ASSESSED CAPSTONE PROJECT.

- This component provides a robust academic rigour to the course.
- Pursue your independent research under the guidance of faculty.
- Capstone should reflect a deep understanding of this subject.

CAPSTONE PROJECT 1

You will produce a FARMER DIARY with the Planting Calendar and Farm Planner.
This component of the gradebook provides a robust academic rigour to the course and will assist you in producing an asset that is an acceptable evidence of your learning and development from this course.

The diary must serve as a ready reckoner and notebook for the farmer. It is in the local language and all material used by you will be translated and make new illustrations where required required. This is an offline work with a submission date.

No	HEADER	CONTENTS
1	KEY INFORMATION	Full Name, Contact details, Aadhar, PAN, other Registrations.
2	FARM DATA SHEET	Area, Boundaries, Elevation, Climatic Zone, Water, other data.
3	SOIL TEST REPORTING	As per Soil Card
4	LEARNING SECTION	The Moon Rhythms, The Zodiacs and their influence.
5	ALMANAC	The Planting Calendar Data for the current year.
6	PLANNER	As per format given for Project work for Local farm

Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB SERIES Jaivik Krishi Paramparik Krishi Yojana
Krishi Panchang Parichay 40 42

ASSESSED CAPSTONE PROJECT.

- Criteria for Assessment:

(1) Originality of approach (2) Independent working
(3) Planning and detailed work (4) Orderly and objective process
(5) Intellectual Stretch: reach a level you never thought possible.

CAPSTONE PROJECT 2

You will produce a FARMER DIARY with the Planting Calendar and Farm Planner.

The Diary must be produced on a computer with the help of a DTP service in A5 size. with spiral binding. Cost of the design and printing will be borne by your sponsor.
You will be assigned a Capstone Supervisor for periodic guidance.

No	INSTRUCTIONS
1	Make us of local proverbs, traditional methods where ever possible.
2	Drawings by you or local artist can be printed as other pages.
3	Combine dates for important festivals, fasts and other rituals in the planner.
4	Any information from your Sponsor can be added as a back section.
5	Plan for an appealing front cover for the farmer
6	The ABL Deck is your reference, do not reproduce it in the Diary.

Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha
2019 ENGLISH

SUB Jaivik Krishi
SERIES Paramparik Krishi Yojana
Krishi Panchang Parichay

41 ○
42 ☑

FINAL ASSESSMENT: COURSE GRADUATION.

- The final assessment as per OBE framework is strict.
- Student must demonstrate the graduate standards to pass.
- An external independent course assessor will be appointed.
- For Certificate: score 80%. No Participation certificate issued.

FINAL COURSE ASSESSMENT

Students have to demonstrate and be assessed that they have the Graduate Attributes (GA) required for Outcome based Education.

The Course Assessor will carry out an independent assessment of each participant based on a multi-axis tool.

- The subject and objective assessment leads to a grade / credits for the Skill Council Qualification Packs (QP) for which this course is valid.
- It is also a stand alone assessment as a skill building competency that is required in Traditional Farming Practices under Jaivik Krishi .

Purpose	Comprehensive	Summative Assessment	Reflective Assessment
Determine students' competencies at graduation to meet the qualification pack determined for this course.	• Comprehensive component means getting a holistic sense of student's progress. • Ability developed for life-long learning and demonstration of compliance to instructions and conforming to value set.	• Assess demonstration of learning, use of a new vocabulary • Apply creative solutions to the scenarios back home. • Will be able to perform in the role of a Master Trainer.	• Review of the Students' learning journey and its narrative. • Giving directions for either remedial paths to graduate from this course if score is low or enhanced learning paths for advanced learners.

Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha

2019 ENGLISH

SUB Jaivik Krishi
SERIES Paramparik Krishi Yojana
Krishi Panchang Parichay

41 ●
42 ☑

FINAL ASSESSMENT: COURSE GRADUATION.

- Course builds competencies for Skill Council's qualification pack.
- This leads to certification accepted by industry for recruitment.
- 3-tier process for redressal of students' grievances.
- Failed candidates may appear for exam after paying exam fees.

FINAL COURSE ASSESSMENT

Multi-Axis assessment is transparent but it is difficult to attain certification.

Components of Your Final Assessment

No	Category	Wt. %	Description
1	GradeBook - 1	30	Weighted Score from Mid Term Evaluation
2	Student Journal	20	Final version with all assignments
3	Project Work	10	Farm activity planner for local farm
4	Participation	10	Case Study discussions and learning wall.
5	Exam Capstone	10	Final Exam Capstone Asset creation
6	Attendance	10	Regular class attendance
7	Assessment	10	As per life long learning values rubric.
	TOTAL	100	

REDRESSAL OF STUDENTS' GRIEVANCES FOR REVIEW OF SCORES.

- Tier 1: Peer group counselling and prepare review application or withdraw.
- Tier 2: Faculty Review Group will review the assessment and can either upgrade or downgrade it. Sponsor may join the review application.
- Tier 3: Appellate Authority: Academic Dean will review the assessment with the Sponsor.

Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha

2019 ENGLISH

SUB Jaivik Krishi
SERIES Paramparik Krishi Yojana
Krishi Panchang Parichay

42 ○
42 🎓

SUGGESTED PATHWAYS FOR COURSE DELIVERY.

- OPTION A: **5 DAYS COURSE** (FULL DAY is 8 hours)
  - Version A1: 1/2 Day + 4 Days = 4.5 days : Residential.
  - Version A2: Spread over 5 Saturdays + 2 weeks for Capstone.

SUGGESTED PATHWAYS FOR COURSE DELIVERY ❶

No.	CARD TITLE	TYPE	DAY	Session	Coverage
01	SITABANI DEVI COMMUNITY COLLEGE	{ }	D1	S1	• Welcome Desk • Registration • Kit Distribution • Introductions • Course Introduction • Method Introduction • Certification Criteria
02	JAIVIK KRISHI KOSHA				
03	COURSE BUMPER: OUTCOME BASED EDUCATION				
04	KRISHI PLANTING CALENDAR 2019	{ }			
05	TABLE OF CONTENTS				
06	GROUP WORK 1: CREATE YOUR LEARNING WALL		1/2 DAY		
07	RECEIVE YOUR LEARNING BOOK				
08	INTRODUCTION TO THE DECK BY TRAINER			S2	• Certification Criteria
09	THE ACTIVITY BASED LEARNING (ABL) DECK	{ }			
10	6 BASIC RHYTHMS OF THE MOON		D2	S3	• Core Theory
11	PHASES OF MOON: 29.6 DAYS				
12	ASCENDING AND DESCENDING MOON: 27.2 DAYS			S4	
13	LUNAR APOGEE AND PERIGEE: 27.5 DAYS				
14	LUNAR NODES (RAHU AND KETU)				
15	MOON IN OPPOSITION TO SATURN: 27.5 DAYS				
16	SCREEN: VIDEOS ON COSMIC RHYTHMS			S5	• Videos
17	GLOSSARY - 1: MOON RHYTHMS				• Vocabulary
18	GROUP WORK 2: PREPARE LEARNING WALL			S6	• Class Work
19	SELF WORK- LEARNING BOOK NO. 1			S7	HOMEWORK
20	QUIZ 1	☑	D3	S5	• Assessment

Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha

2019 ENGLISH

SUB Jaivik Krishi
SERIES Paramparik Krishi Yojana
Krishi Panchang Parichay

42 ●
42 🎓

SUGGESTED PATHWAYS FOR COURSE DELIVERY.

- OPTION B: **16 SESSIONS COURSE** (1 Session = 2 to 3 hours)
  - Version B1: 2 x Fri-Sat-Sun : Residential. [Fri 4pm check in]
  - Version B2: 2 sessions / week + 2 weeks for Capstone.

SUGGESTED PATHWAYS FOR COURSE DELIVERY ❷

No.	CARD TITLE	TYPE	DAY	Session	Coverage
21	MOON IN CONSTELLATION 27.3 Days		D3	S6	• Core Theory • Videos • Vocabulary
22	SUN IN CONSTELLATION: 365 DAYS				
23	SUITABLE FARMING ACTIVITIES				
24	SCREEN - ZODIAC, MOON AND SUN AND EARTH				
25	GLOSSARY 2: CONSTELLATIONS				
26	SURVEY: TRADITIONAL FARMING PRACTICES			S7	• Survey
27	ACTIVITY: NIGHT SKY OBSERVATION			S8	• Observatory
28	GROUP WORK 3: PREPARE YOUR PRESENTATION		D4	S9	• Class Work
29	SELF WORK: LEARNING BOOK NO 2			S10	HOMEWORK
30	QUIZ II:	☑		S11	• Presentation • Assessment
31	TOWN SQUARE 1: OUR COSMOS			S12	
32	COMPREHENSIVE ASSESSMENT: MID COURSE	☑		S13	
33	LIFE LONG LEARNING VALUES RUBERIC				
34	KEY TO PLANTING CALENDAR	{ }	D5	S14	• Interpretation • Decision Making
35	PLANTING CALENDAR FOR JULY 2019				
36	PLANTING CALENDAR AUGUST 2019				
37	PLANTING CALENDAR SEPTEMBER 2019				
38	CASE: No 1: AMRITA INTEGRATED FARMS			S15	• Case Discuss
39	PROJECT: PLAN YOUR FARM ACTIVITIES			S16	• HOMEWORK
40	ASSESSED CAPSTONE PROJECT		HOME		CAPSTONE
41	FINAL ASSESSMENT: COURSE GRADUATION	☑			AFTER PROCESS

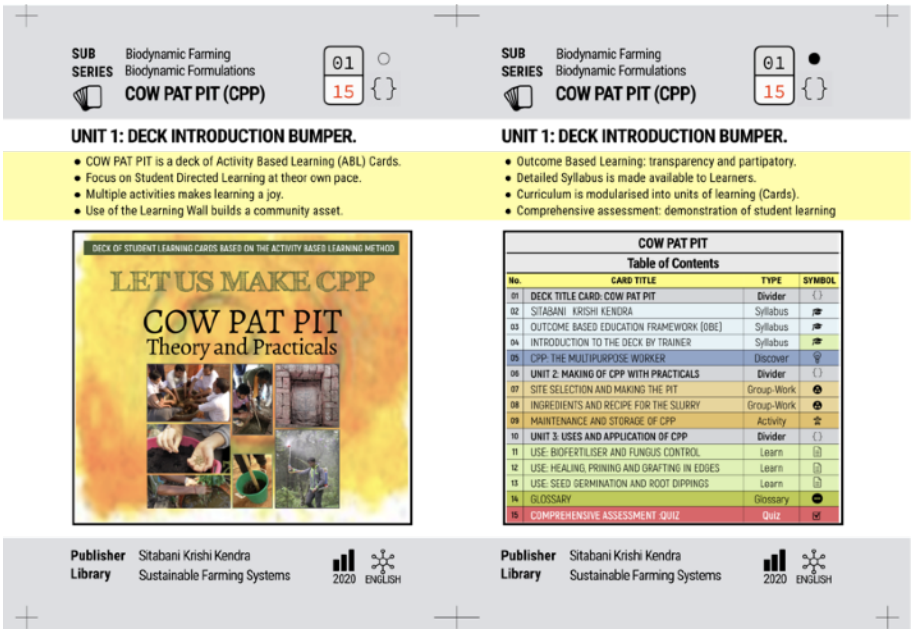
Publisher Sitabani Devi Community College
Library Jaivik Krishi Kosha

2019 ENGLISH

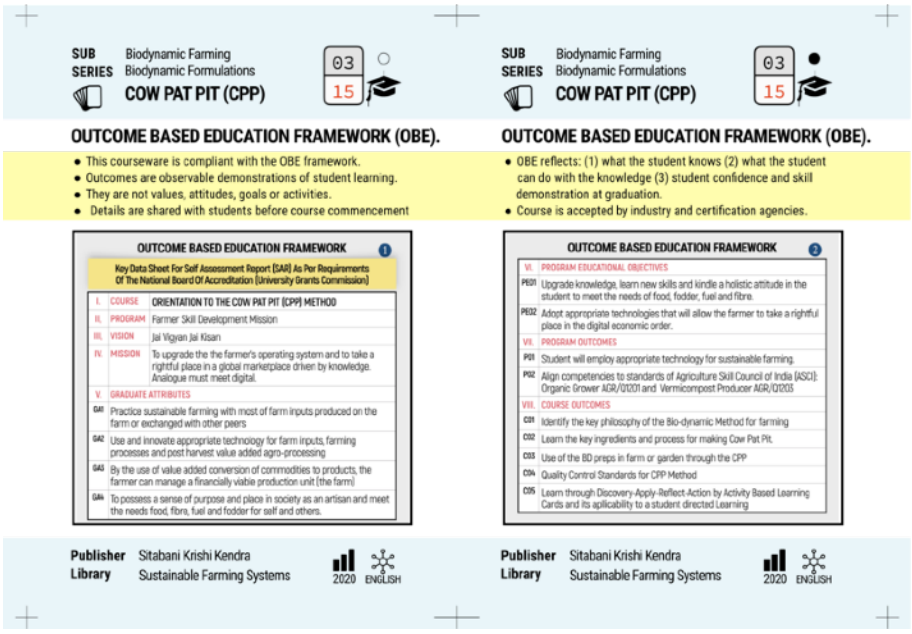
V- APPENDIX B

B. VERY SHORT COURSE: COW PAT PIT (THEORY AND PRACTICALS)

B.1. This is a prototype card deck to teach how to make Cow Pat Pit (CPP) organic input with other practical farm activities to women dairy farmers. It is planned as a few sessions with an overnight carry forward.


SUB SERIES Biodynamic Farming
Biodynamic Formulations
COW PAT PIT (CPP)
01
15
UNIT 1: DECK INTRODUCTION BUMPER.
• COW PAT PIT is a deck of Activity Based Learning (ABL) Cards.
• Focus on Student Directed Learning at theor own pace.
• Multiple activities makes learning a joy.
• Use of the Learning Wall builds a community asset.
DECK OF STUDENT LEARNING CARDS BASED ON THE ACTIVITY BASED LEARNING METHOD
LET US MAKE CPP
COW PAT PIT
Theory and Practicals
Publisher Sitabani Krishi Kendra
Library Sustainable Farming Systems
2020
ENGLISH
SUB SERIES Biodynamic Farming
Biodynamic Formulations
COW PAT PIT (CPP)
01
15
UNIT 1: DECK INTRODUCTION BUMPER.
• Outcome Based Learning: transparency and partipatory.
• Detailed Syllabus is made available to Learners.
• Curriculum is modularised into units of learning (Cards).
• Comprehensive assessment: demonstration of student learning
COW PAT PIT
Table of Contents
No. CARD TITLE TYPE SYMBOL
01 DECK TITLE CARD: COW PAT PIT Divider
02 SITABANI KRISHI KENDRA Syllabus
03 OUTCOME BASED EDUCATION FRAMEWORK (OBE) Syllabus
04 INTRODUCTION TO THE DECK BY TRAINER Syllabus
05 CPP: THE MULTIPURPOSE WORKER Discover
06 UNIT 2: MAKING OF CPP WITH PRACTICALS Divider
07 SITE SELECTION AND MAKING THE PIT Group-Work
08 INGREDIENTS AND RECIPE FOR THE SLURRY Group-Work
09 MAINTENANCE AND STORAGE OF CPP Activity
10 UNIT 3: USES AND APPLICATION OF CPP Divider
11 USE: BIOFERTILISER AND FUNGUS CONTROL Learn
12 USE: HEALING, PRINING AND GRAFTING IN EDGES Learn
13 USE: SEED GERMINATION AND ROOT DIPPINGS Learn
14 GLOSSARY Glossary
15 COMPREHENSIVE ASSESSMENT QUIZ Quiz
Publisher Sitabani Krishi Kendra
Library Sustainable Farming Systems
2020
ENGLISH

Card No. 2 is omitted to protect Client confidentiality.


SUB SERIES Biodynamic Farming
Biodynamic Formulations
COW PAT PIT (CPP)
03
15
OUTCOME BASED EDUCATION FRAMEWORK (OBE).
• This courseware is compliant with the OBE framework.
• Outcomes are observable demonstrations of student learning.
• They are not values, attitudes, goals or activities.
• Details are shared with students before course commencement
OUTCOME BASED EDUCATION FRAMEWORK
Key Data Sheet For Self Assessment Report (SAR) As Per Requirements Of The National Board Of Accreditation (University Grants Commission)
I. COURSE ORIENTATION TO THE COW PAT PIT (CPP) METHOD
II. PROGRAM Farmer Skill Development Mission
III. VISION Jai Vigyan Jai Kisan
IV. MISSION To upgrade the the farmer's operating system and to take a rightful place in a global marketplace driven by knowledge. Analogue must meet digital.
V. GRADUATE ATTRIBUTES
GA1 Practice sustainable farming with most of farm inputs produced on the farm or exchanged with other peers
GA2 Use and innovate appropriate technology for farm inputs, farming processes and post harvest value added agro-processing
GA3 By the use of value added conversion of commodities to products, the farmer can manage a financially viable production unit (the farm)
GA4 To possess a sense of purpose and place in society as an artisan and meet the needs food, fibre, fuel and fodder for self and others.
Publisher Sitabani Krishi Kendra
Library Sustainable Farming Systems
2020
ENGLISH
SUB SERIES Biodynamic Farming
Biodynamic Formulations
COW PAT PIT (CPP)
03
15
OUTCOME BASED EDUCATION FRAMEWORK (OBE).
• OBE reflects: (1) what the student knows (2) what the student can do with the knowledge (3) student confidence and skill demonstration at graduation.
• Course is accepted by industry and certification agencies.
OUTCOME BASED EDUCATION FRAMEWORK
VI. PROGRAM EDUCATIONAL OBJECTIVES
PEO1 Upgrade knowledge, learn new skills and kindle a holistic attitude in the student to meet the needs of food, fodder, fuel and fibre.
PEO2 Adopt appropriate technologies that will allow the farmer to take a rightful place in the digital economic order.
VII. PROGRAM OUTCOMES
PO1 Student will employ appropriate technology for sustainable farming.
PO2 Align competencies to standards of Agriculture Skill Council of India (ASCI): Organic Grower AGR/Q1201 and Vermicompost Producer AGR/Q1203
VIII. COURSE OUTCOMES
CO1 Identify the key philosophy of the Bio-dynamic Method for farming
CO2 Learn the key ingredients and process for making Cow Pat Pit.
CO3 Use of the BD preps in farm or garden through the CPP
CO4 Quality Control Standards for CPP Method
CO5 Learn through Discovery-Apply-Reflect-Action by Activity Based Learning Cards and its applicability to a student directed Learning
Publisher Sitabani Krishi Kendra
Library Sustainable Farming Systems
2020
ENGLISH

SUB SERIES Biodynamic Farming / Biodynamic Formulations
COW PAT PIT (CPP)
06 / 15

UNIT 2: MAKING OF CPP WITH PRACTICALS.

- This module is for practical learning with physical activity.
- Making CPP is a wonderful and fun community activity.
- Every Farmer small or big can make CPP.
- Neighbours should help each other when making CPP.

Publisher Sitabani Krishi Kendra
Library Sustainable Farming Systems
2020 ENGLISH

SUB SERIES Biodynamic Farming / Biodynamic Formulations
COW PAT PIT (CPP)
06 / 15

UNIT 2: MAKING OF CPP WITH PRACTICALS.

Instructions:
- To prepare for this activity, please dress in working clothes.
- Everyone will participate. No spectators.
- You must work with Cow dung and touch it with your bare hands.

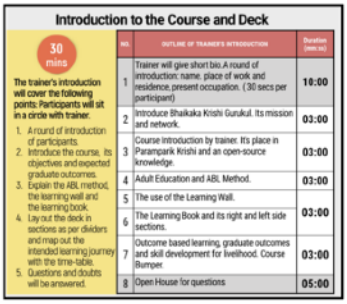
COW PAT PIT: PRACTICAL ACTIVITY
ACTIVITY PLAN
1 Work Teams — Divide participants into 5 teams
2 Source Ingredients — Cow Dung, rock dust, egg shells and water
3 Crush Egg Shells — Designated Team
4 Mix and make Slurry — Group Activity - alternative teams
6 Locate site, dig pit make brick chamber — As per drawing
7 Pour Slurry — Pour slurry into brick chamber
8 BD preps — Place BD preps in the slurry
9 Shelter — Build Shelter over Pit
ON FIELD PRACTICALS - MENU

Publisher Sitabani Krishi Kendra
Library Sustainable Farming Systems
2020 ENGLISH

SUB SERIES Biodynamic Farming / Biodynamic Formulations
COW PAT PIT (CPP)
04 / 15

INTRODUCTION TO DECK BY TRAINER.

- Trainer will layout the course outline, objectives and sequence.
- OBE evaluation for the course
- Expected graduate outcomes
- Use of the ABL Method, Learning Wall and Student Notebook.

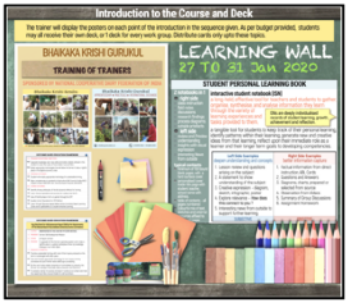

Introduction to the Course and Deck
30 mins
The trainer's introduction will cover the following points: Participants will sit in a circle with trainer.
1. A round of introduction of participants.
2. Introduce the course, its objectives and expected graduate outcomes.
3. Explain the ABL method, the learning wall and the learning book.
4. Lay out the deck in sections as per dividers and map out the intended learning journey with the time-table.
5. Questions and doubts will be answered.
1 Trainer will give short bio.A round of introduction: name, place of work and residence, present occupation. (30 secs per participant) 10:00
2 Introduce Bhaikaka Krishi Gurukul. Its mission and network. 03:00
3 Course introduction by trainer. It's place in Parampark Krishi and an open-source knowledge. 03:00
4 Adult Education and ABL Method. 03:00
5 The use of the Learning Wall. 03:00
6 The Learning Book and its right and left side sections. 03:00
7 Outcome based learning, graduate outcomes and skill development for livelihood. Course Bumper. 03:00
8 Open House for questions 05:00

Publisher Sitabani Krishi Kendra
Library Sustainable Farming Systems
2020 ENGLISH

SUB SERIES Biodynamic Farming / Biodynamic Formulations
COW PAT PIT (CPP)
04 / 15

INTRODUCTION TO DECK BY TRAINER.

- Display posters on the topics and distribute introductory Cards.
- Participants will learn in by self and in small and large groups.
- Learning Notebook Kit will be distributed.
- Multi-modal learning helps to learn with joy and motivation.

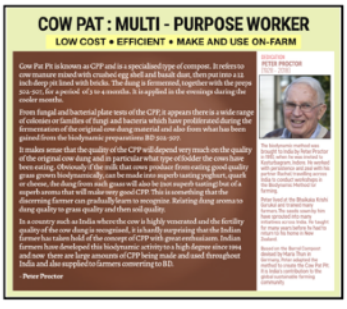


Publisher Sitabani Krishi Kendra
Library Sustainable Farming Systems
2020 ENGLISH

SUB SERIES Biodynamic Farming / Biodynamic Formulations
COW PAT PIT (CPP)
05 / 15

CPP: THE MULTI-PURPOSE WORKER.

- Paramparik Krishi: farmer friendly, traditional knowledge
- Efficient way to spread influence of BD Preps 502-507 on Farm.
- Bio-fertiliser, anti-fungal, source for good microbes for land.
- Easy to make by at family level. Low cost alternative to market.

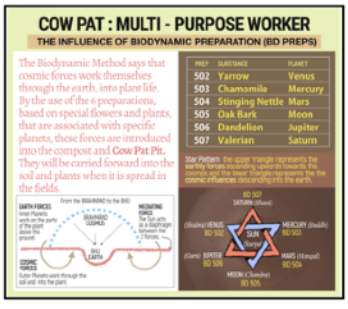


Publisher Sitabani Krishi Kendra
Library Sustainable Farming Systems
2020 ENGLISH

SUB SERIES Biodynamic Farming / Biodynamic Formulations
COW PAT PIT (CPP)
05 / 15

CPP: THE MULTI-PURPOSE WORKER.

- Biodynamics is drishti - darshan for Life and the Cosmos.
- BHŪ - earthly forces and BRAHMĀND - cosmic forces : balance.
- Infuses the Bhū and Brahmānd forces into the farm by BD Preps.
- Efficient way to spread influence of BD Preps 502-507 on Farm.

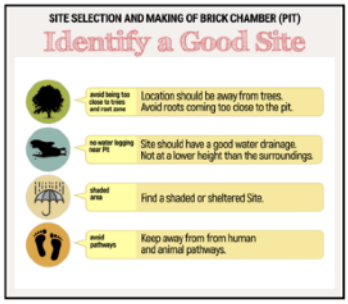

COW PAT : MULTI - PURPOSE WORKER
THE INFLUENCE OF BIODYNAMIC PREPARATION (BD PREPS)
502 Yarrow Venus
503 Chamomile Mercury
504 Stinging Nettle Mars
505 Oak Bark Moon
506 Dandelion Jupiter
507 Valerian Saturn

Publisher Sitabani Krishi Kendra
Library Sustainable Farming Systems
2020 ENGLISH

SUB SERIES Biodynamic Farming
Biodynamic Formulations
COW PAT PIT (CPP)
07 / 15

SITE SELECTION AND MAKING THE PIT.

- Site Selection:
- Choose location away from trees and with good water drainage.
- Shaded area, or build a shelter above the Pit.
- If ideal location not found; dig a trench around Pit.

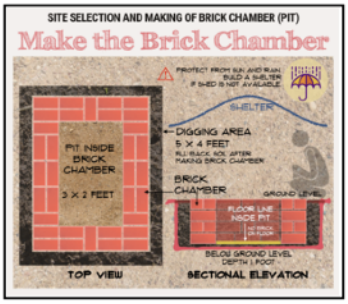

SITE SELECTION AND MAKING OF BRICK CHAMBER (PIT)
Identify a Good Site
Location should be away from trees. Avoid roots coming too close to the pit.
Site should have a good water drainage. Not at a lower height than the surroundings.
Find a shaded or sheltered Site.
Keep away from from human and animal pathways.

Publisher Sitabani Krishi Kendra
Library Sustainable Farming Systems
2020 ENGLISH

SUB SERIES Biodynamic Farming
Biodynamic Formulations
COW PAT PIT (CPP)
07 / 15

SITE SELECTION AND MAKING THE PIT.

- Dimensions: • Dig a Rectangular Pit of 5x4x1 feet (HxWxD)
- Line sides with Bricks so that the chamber is 3x2x1 feet
- Build a shade to protect from direct sunlight and rains.
- No cement for bonding the bricks. Pre-soak bricks in water.

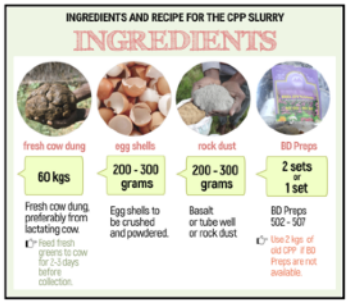


Publisher Sitabani Krishi Kendra
Library Sustainable Farming Systems
2020 ENGLISH

SUB SERIES Biodynamic Farming
Biodynamic Formulations
COW PAT PIT (CPP)
08 / 15

INGREDIENTS AND RECIPE FOR THE SLURRY.

- FOR SLURRY: • Cow Dung from lactating Cow - 60kgs
- Crushed Egg shells powder - 200-300 grams.
- Basalt / Tube well dust - 200-300 grams.
- BD Preps (502 to 507) - 2 Sets if first time; else 1 Set.


INGREDIENTS AND RECIPE FOR THE CPP SLURRY
INGREDIENTS
fresh cow dung
egg shells
rock dust
BD Preps
60 kgs
200 - 300 grams
200 - 300 grams
2 sets or 1 set
Fresh cow dung, preferably from lactating cow
Egg shells to be crushed and powdered.
Basalt or tube well or rock dust
BD Preps 502 - 507

Publisher Sitabani Krishi Kendra
Library Sustainable Farming Systems
2020 ENGLISH

SUB SERIES Biodynamic Farming
Biodynamic Formulations
COW PAT PIT (CPP)
08 / 15

INGREDIENTS AND RECIPE FOR THE SLURRY.

- PROCESS: Layout the dung on a plastic sheet / in a tub.
- Sprinkle water from mug occasionally and knead for 60 mins.
- Group will work together in circle. Others will crush egg shells.
- Sprinkle the egg shell and rock powder into the dung heap.

Publisher Sitabani Krishi Kendra
Library Sustainable Farming Systems
2020 ENGLISH

SUB SERIES Biodynamic Farming
Biodynamic Formulations
COW PAT PIT (CPP)
09 / 15

MAINTENANCE AND STORAGE OF CPP.

- MAINTENANCE: For upto 60 -90 days.
- Keep the Gunny Cloth Wet. Occasionally moisten the Bricks.
- After a month start turning the CPP every week.
- CPP is ready in 2 to 3 months.

COW PAT PIT: MAINTENANCE AND STORAGE
MAINTENANCE UPTO 90 DAYS
GUNNY CLOTH MUST ALWAYS REMAIN WET.
Check on daily basis
Occasionally wet the bricks also
After a month, turn the CPP every week
CPP will be ready in 60 to 90 days

Publisher Sitabani Krishi Kendra
Library Sustainable Farming Systems
2020 ENGLISH

SUB SERIES Biodynamic Farming
Biodynamic Formulations
COW PAT PIT (CPP)
09 / 15

MAINTENANCE AND STORAGE OF CPP.

- STORAGE: For upto 180 days.
- Store in a Clay Pot in a well shaded and protected location.
- Surround with saw dust, coco peat or gunny cloth. Keep Wet.
- Ready CPP can be stored up-to 6 months.

COW PAT PIT: MAINTENANCE AND STORAGE
STORAGE UPTO 180 DAYS
HARVEST AFTER 60 - 90 DAYS. CAN BE STORED UPTO 180 DAYS.
STORE CPP in EARTHEN POTS
COVERED by GUNNY CLOTH, SAW DUST OR COIR PEAT
COVERING MUST REMAIN WET.

Publisher Sitabani Krishi Kendra
Library Sustainable Farming Systems
2020 ENGLISH

SUB SERIES Biodynamic Farming
Biodynamic Formulations
COW PAT PIT (CPP)
10 / 15

UNIT 3: USES AND APPLICATION OF CPP.

- AS AN APPROPRIATE TECHNOLOGY
- Farmer can make on-farm without off-farm purchase.
- Indigenous adaption, suited for Indian conditions.
- Meets criteria for a Good Technology.

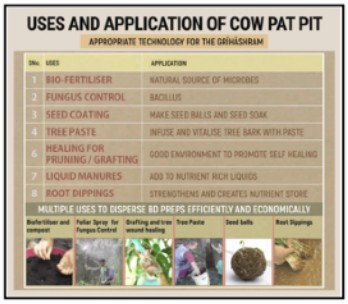
USES AND APPLICATION OF COW PAT PIT
APPROPRIATE TECHNOLOGY FOR THE GRIHĀSHRAM
Appropriate technology stands for the principles of independence, personal choice and to lead a life with dignity, integrated with local beliefs and traditions.
GOOD TECHNOLOGIES
Solve local problems with appropriate technology for the farm, its soil and animals at the micro scale and in harmony with the environment at the macro scale.
सबका साथ सबका विकास

Publisher Sitabani Krishi Kendra
Library Sustainable Farming Systems
2020 ENGLISH

SUB SERIES Biodynamic Farming
Biodynamic Formulations
COW PAT PIT (CPP)
10 / 15

UNIT 3: USES AND APPLICATION OF CPP.

- USES: Efficient and Economical medium to disperse BD preps.
- Alternative to BD Preps when making new Compost / CPP.
- Biofertliser, Fungus Control, Seed Coating, Tree Paste, Dippings.
- Add to Liquid Manures.


USES AND APPLICATION OF COW PAT PIT
APPROPRIATE TECHNOLOGY FOR THE GRIHĀSHRAM
1 BIO-FERTILISER — NATURAL SOURCE OF MICROBES
2 FUNGUS CONTROL — BACILLUS
3 SEED COATING — MAKE SEED BALLS AND SEED SOAK
4 TREE PASTE — INFUSE AND VITALISE TREE BARK WITH PASTE
6 HEALING FOR PRUNING / GRAFTING — GOOD ENVIRONMENT TO PROMOTE SELF HEALING
7 LIQUID MANURES — ADD TO NUTRIENT RICH LIQUIDS
8 ROOT DIPPINGS — STRENGTHENS AND CREATES NUTRIENT STORE
MULTIPLE USES TO DISPERSE BD PREPS EFFICIENTLY AND ECONOMICALLY

Publisher Sitabani Krishi Kendra
Library Sustainable Farming Systems
2020 ENGLISH

SUB SERIES Biodynamic Farming
Biodynamic Formulations
COW PAT PIT (CPP)
11 / 15

USE: BIOFERTILISER AND FUNGUS CONTROL.

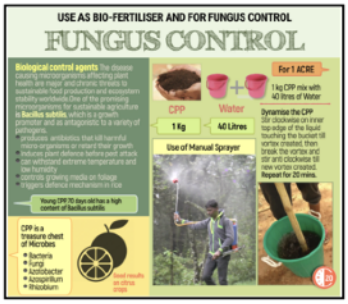
- Biofertiliser:
- Growth hormones promotes robust and balanced growth.
- For 1 acres: 1kg CPP (more 90 days old) + 40 litres of water.
- Dynamise solution and sprinkle or use flowform.

Publisher Sitabani Krishi Kendra
Library Sustainable Farming Systems
2020 ENGLISH

SUB SERIES Biodynamic Farming
Biodynamic Formulations
COW PAT PIT (CPP)
11 / 15

USE: BIOFERTILISER AND FUNGUS CONTROL.

- Fungus Control:
- Biological Control by Bacillus subtilus microbe.
- For 1 acres: 1kg CPP (70 - 90 days old) + 40 litres of water.
- Good as Foliar spray especially for Citrus plants.



Publisher Sitabani Krishi Kendra
Library Sustainable Farming Systems
2020 ENGLISH

SUB SERIES Biodynamic Farming
Biodynamic Formulations
COW PAT PIT (CPP)
12 / 15

USE: HEALING, PRUNING AND GRAFTING EDGES.

- GRAFTING
- Use as paste to surround bark after sealing it with wax and tape.
- Infuses influence of BD preps into the Cambium.

Publisher Sitabani Krishi Kendra
Library Sustainable Farming Systems
2020 ENGLISH

SUB SERIES Biodynamic Farming
Biodynamic Formulations
COW PAT PIT (CPP)
12 / 15

USE: HEALING, PRUNING AND GRAFTING EDGES.

- PRUNING AND TREE WOUNDS
- Use as paste arounf wonded area for healing.
- Use in Tree Paste to paint the bark and infuse healing properties.

Publisher Sitabani Krishi Kendra
Library Sustainable Farming Systems
2020 ENGLISH

SUB SERIES Biodynamic Farming
Biodynamic Formulations
COW PAT PIT (CPP)
13 / 15

USE: SEED GERMINATION AND ROOT DIPPINGS.

- SEED BALLS: Eco-friendly and efficient way to disperse seeds.
- SEED PRE-SOAK: activate the seeds and better germination
- CPP used in mix to infuse effect of BD Preps.
- Restore degraded fields for fodder and pasture.

CPP USE FOR SEED BALLS, GERMINATION AND ROOT DIPPINGS
SEED BALLS AND GERMINATION
How to make Seed Balls
why use seed balls ?
CPP for Seed Germination
Mix CPP in water
Soak seeds overnight
Then sow in potting mix to germinate

Publisher Sitabani Krishi Kendra
Library Sustainable Farming Systems
2020 ENGLISH

SUB SERIES Biodynamic Farming
Biodynamic Formulations
COW PAT PIT (CPP)
13 / 15

USE: SEED GERMINATION AND ROOT DIPPINGS.

- ROOT AND STEM DIPPINGS: better success rates
- CPP as bio-fertiliser and anti-fungal agent.
- Very effective for translating Paddy in the fields.
- Best for transplanting instead of expensive market products.

Publisher Sitabani Krishi Kendra
Library Sustainable Farming Systems
2020 ENGLISH

SUB SERIES Biodynamic Farming
Biodynamic Formulations
COW PAT PIT (CPP)
14 / 15

GLOSSARY OF KEYWORDS.

- Keywords hold the cognitive map of the meaning.
- A list of keywords is provided for remembering, quick revision
- Try to recall each word and its meaning and context.
- Recollect any image or symbol associated with the words.

Glossary : Cow Pat Pit

COMPOST	EARTH FORCES	COSMIC FORCES
MEDIATING FORCE	BD PREPS	SITE SELECTION
BRICK CHAMBER	SLURRY	COW DUNG
ROCK DUST	EGG SHELLS	GUNNY BAG
STORAGE	HARVEST TIME	STORAGE TIME
FUNGUS CONTROL	BIO-FERTILISER	SEED BALLS
SEED PRE-SOAK	PRUNING	GRAFTING
ROOT DIPPING	LIQUID MANURE	TREE PASTE
ROOT	STEM	LEAF
FLOWER	SEED	BIODYNAMICS

Publisher Sitabani Krishi Kendra
Library Sustainable Farming Systems
2020 ENGLISH

SUB SERIES Biodynamic Farming
Biodynamic Formulations
COW PAT PIT (CPP)
14 / 15

GLOSSARY OF KEYWORDS.

- Use google search for learning more about these words.
- Visit the website www.biodynamics.in
- Write down these words in your Student Notebook.
- Add your own keywords to the list.

Glossary : Cow Pat Pit

Sno	USES	APPLICATION OF GLOSSARY CARDS
1	RECALL	REMEMBER THE MEANING OF THIS KEYWORD
2	NOTEBOOK	WRITE DOWN EACH WORD AND ITS MEANING
3	REVISE	REFER TO YOUR NOTES TO LOOKUP WORDS
4	ASK A FRIEND	ASK YOUR COURSE MATE FOR HELP
6	GAME - QUIZ	RANDOM WORDS ASKED TO EACH OTHER
7	REFERENCE	GOOGLE THE KEYWORDS AND READ MORE

Publisher Sitabani Krishi Kendra
Library Sustainable Farming Systems
2020 ENGLISH

SUB SERIES Biodynamic Farming
Biodynamic Formulations
COW PAT PIT (CPP)
15 / 15

COMPREHENSIVE ASSESSMENT: Quiz.

- Quiz is a self assessment of your learning.
- Provides feedback to Trainer about group level learning.
- A remedial route for revision or extra study time can be provided.
- The Score remains confidential. Study and prepare.

Quiz 1 : COW PAT PIT

Complete the sentences with fill in the blanks with the correct answer.

QNo.	QUESTION
1	The short name for COW PAT PIT is _____
2	It is an economically and efficient way to spread _____ in the fields.
3	It is made from ____kgs of Cow dung, ____g of rock dust and _____ crushed egg shells.
4	The ingredients are mixed [1] in dry form OR [2] as a slurry with water [Tick the right answer]
5	Site for pit should be away from trees and well drained [true or false].
6	Size of pit to be dug is _____ [L x B] in feet.
7	Size of the Brick chamber inside pit is _____ [L X B].
8	Bricks should be placed on the floor inside the Chamber. [True or False].
9	Use cement to join the bricks and plaster the chamber. [True or False].
10	Fill the Slurry in the Pit to a depth of _____inches.
11	BD _____ prep to be dynamised in water and then poured over slurry.
12	Cover the pit with a _____ Keep the Cloth _____ [Dry or Wet]
13	CPP can be harvested between _____ to _____days. It can be stored for _____ days.
14	Uses for CPP:
15	CPP is _____ [bio or chemical fertiliser]. It is good for _____ control.

Publisher Sitabani Krishi Kendra
Library Sustainable Farming Systems
2020 ENGLISH

SUB SERIES Biodynamic Farming
Biodynamic Formulations
COW PAT PIT (CPP)
15 / 15

COMPREHENSIVE ASSESSMENT: Quiz.

- Grade Book is drawn from a basket of weighted activities.
- Students are constantly monitored for the various activities.
- Assessed for the contribution they make towards group learning.
- The Teachig Asessment (TA) palys a key role in assessment.

COMPREHENSIVE COURSE ASSESSMENT

Grade Book is assessed from a diverse basket of sources with a weightage.

Components of Your Gradebook

No	Category	Wt.%	Description
1	Test	10	Objective Type Quiz.
2	Group Work	30	Specific task oriented work in groups.
3	Student Journal	10	Notes for each card in notebook.
4	Participation	20	Classroom participation, Contribution to learning wall.
6	Attendance	20	Regular class attendance
7	Assessment	10	As per life long learning values rubric.
	TOTAL	100	

The Teaching Assistant (TA) is constantly monitoring and recording the class participation and attendance for all students. Also after each day, the Facilitator and TA review the class and the learning work of students. After Final Assessment the grade book will be handed over to the student and the sponsor.

Publisher Sitabani Krishi Kendra
Library Sustainable Farming Systems
2020 ENGLISH